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Suppl Table S1. Major QTLs identified in MT-RILs, backcrossed lines, and the MPH datasets

				RILs				BCF_1s				MPH				
Trait	Name	Chr.	Interval	LOD	a	R2(%)	PVE (%)	LOD	a+d	R2(%)	PVE (%)	LOD	d	R2(%)	PVE (%)	QTL type
CL	*qCL1.1*	1	RM600-S01054	3.05	2.87	2.4	89.2				77.4				17.8	A
	qCL1.2	1	S01143A-S01147									4.97	2.37	10.5		OD
	qCL1.3	1	S01147-S01157B	50.18	-14.14	57.2		44.18	9.56	65.7						A
	qCL3.1	3	RM7-RM251	6.27	4.40	5.5		5.78	-3.01	6.5						A
	qCL6.1	6	S06087-S06100	9.92	5.01	7.2		6.07	-2.68	5.2						A
	qCL7.1	7	S07035-S07048	8.98	5.35	8.2										A
	qCL7.2	7	S07048-S07050A									3.76	1.99	7.3		OD
	qCL8.1	8	S08059-S08066	3.22	2.58	1.9										A
	qCL10.1	10	S10026C-RM184	5.2	-4.12	4.9										A
	qCL11.1	11	RM21-RM206	3.74	3.08	2.7										A
DTH	*qDTH1.1*	1	RM1-S01027				73.7	2.91	0.83	2.4	38.7				no analysis	A
	qDTH3.1	3	S03137-S03145	7.4	2.35	5.7										A
	qDTH6.1	6	RM527-RM3183					27.68	3.24	36.3						A
	qDTH7.2	7	S07050A-S07055B	43.29	7.68	61.1										A
	qDTH11.1	11	RM206-RM187	7.66	2.58	6.9										A
PN	*qPN3.1*	3	S03033-S03024A	3.22	0.64	6.8	14.0				14.0				7.5	A
	qPN3.2	3	S03041-RM7					2.57	-0.30	5.7						A
	qPN5.1	5	RM146-RM430					4.33	0.37	8.4						A
	qPN5.2	5	RM163-S05087									3.27	0.38	7.5		OD
	qPN6.1	6	RM5087-S06084	3.26	0.66	7.2										A
PL	*qPL1.1*	1	S01143A-S01147	6.84	-0.98	10.2	40.2				43.1				24.5	A
	qPL1.2	1	S01147-S01157B					6.44	0.56	11.2						A
	qPL4.1	4	RM348-S04120					13.54	0.86	26.7						A
	qPL4.2	4	S04120-S04128									7.58	0.57	11.7		OD
	qPL5.1	5	S05062-RM146	5.49	0.94	9.5										A
	qPL6.1	6	S06087-S06100	3.85	0.69	5.0		2.72	-0.38	5.2						A
	qPL7.1	7	S07035-S07048	8.41	1.20	15.5						7.68	0.59	12.8		D
SN	*qSN1.1*	1	S01022-RM1	3.87	11.87	5.0	64.0				40.6	15.76	15.96	26.7	32.1	OD
	qSN1.2	1	RM428-RM259					10.5	-13.53	13.2						A
	qSN1.3	1	RM259-RM600	5.76	18.71	12.5										A
	qSN1.4	1	S01143A-S01147	4.89	-12.63	5.7										A
	qSN2.1	2	RM438-RM424	2.52	10.44	3.9										A
	qSN2.2	2	RM492-RM71					6.83	-9.75	6.8						A
	qSN3.1	3	S03010B-RM231					3.14	6.90	3.4						A
	qSN4.1	4	RM303-S04087A					4.7	9.10	6.0						A
	qSN4.2	4	RM348-S04120	5.84	-14.42	7.4										A
	qSN6.1	6	RM50-RM527					9.4	12.49	11.2						A
	qSN6.2	6	S06087-S06100	3.28	10.93	4.3										A
	qSN7.1	7	S07048-S07050A	13.99	24.87	22.1										A
	qSN7.2	7	S07080-RM234	2.79	-10.91	4.3										A
	qSN8.1	8	RM447-S08112									5.04	-7.21	5.4		UD
SF	*qSF1.1*	1	S01147-S01157B	9.42	-5.44	18.4	28.2				48.2				no analysis	A
	qSF6.1	6	S06015-S06018					11.63	-9.69	23.9						A
	qSF6.2	6	RM50-RM527					5.34	-6.47	10.6						A
	qSF9.1	9	S09055-S09058	3.64	3.96	9.8										A
TGW	*qTGW2.1*	2	S02010-S02020				32.3	5.93	0.35	5.9	17.2				20.2	A
	qTGW2.2	2	S02043-RM438	11.41	-0.99	17.0										A
	qTGW3.1	3	S03145-S03152B									2.94	0.37	9.1		OD
	qTGW8.1	8	S08020A-RM25	3.71	-0.56	5.3										A
	qTGW9.1	9	RM108-RM205									3.68	-0.41	11.1		UD
	qTGW12.1	12	S12109A-RM17	6.35	-0.76	10.0		9.56	0.49	11.3						A
GYP	*qGYP1.1*	1	RM428-RM259	6.18	2.31	8.4	54.9				25.1				39.3	A
	qGYP1.2	1	RM259-RM600									3.85	1.77	5.6		OD
	qGYP1.3	1	S01147-S01157B	21.83	-4.60	33.1										A
	qGYP4.1	4	RM348-S04120					3.96	2.00	8.1						A
	qGYP5.1	5	S05095-RM480									6.95	2.43	10.6		OD
	qGYP6.1	6	S06015-S06018					6.66	-2.91	17.0		8.24	-2.86	14.6		UD
	qGYP7.1	7	S07035-S07048	8.96	3.01	14.1										A
	qGYP8.1	8	S08059-S08066									2.29	1.26	2.8		OD
	qGYP10.1	10	S10019-S10026C									3.77	-1.80	5.8		UD
PYP	*qPYP1.1*	1	S01143A-S01147	9.09	-2.70	11.5	38.7				32.5				35.4	A
	qPYP1.2	1	S01160-RM104					5.11	2.17	6.2						A
	qPYP6.1	6	RM50-RM527					11.25	4.46	26.2		12.83	4.55	31.7		OD
	qPYP7.1	7	S07035-S07048	16.05	4.14	27.2										A
	qPYP11.1	11	S11112-S11117B									2.6	1.55	3.7		OD

Suppl Table S2. EpQTLs of MT-RILs and BCF$_1$ populations and MPH datasets of BCF1s.

	Trait	Chr.	Interval i	Chr.	Interval j	LOD	Ai	Aj	AAij	H^2(Ai)	H^2(Aj)	H^2(AAij)	PVE (%)
RIL	CL		RM271-RM258		RM167-RM202	4.76	-2.47*		4.14	0.0143	0.0003	0.0402	4.02
	DTH		RM104-RM414		RM418-RM11	4.82			-2.13	0.0002	0	0.0138	2.12
			RM527-RM3183		S07050A-S07055B	44.11		7.77***	-1.56	0.0012	0.1834	0.0074	
	PN		S03027-S03041		RM163-S05087	6.26			0.75	0.0183	0.0043	0.0946	29.96
			RM347-S03136		RM5087-S06084	5		0.44**	-0.68	0.0132	0.0325	0.0777	
			S07048-S07050A		RM429-S07118	6.01			0.88	0.0061	0.0043	0.1273	
	SF		S01022-RM1		S08059-S08066	4.89		2.33*	3.31	0.0104	0.0319	0.0644	17.67
			RM1-S01027		S11004A-RM332	5.44			-4.37	0.0011	0.0043	0.1123	
	TGW		RM259-RM600		RM447-S08112	5.48			-0.62	0.0004	0.005	0.0669	18.53
			S02010-S02020		RM289-S05062	5.5	-0.4**		0.42	0.0278	0.007	0.0307	
			S03137-S03145		RM206-RM187	5.9			-0.71	0.0002	0	0.0877	
	GYP		S02000A-RM485		S12056-RM260	5.5			-2.36	0.0004	0.0014	0.0738	13.73
			RM346-RM336		S11059-S11070	5.42		1.15*	-2.19	0.0001	0.0175	0.0635	
	PYP		S01158-S01160		S12109B-S12094	4.71		-1.48**	1.7	0.0023	0.037	0.0488	20.08
			RM11-S07071		S11059-S11070	9.67			-3	0.0024	0.0017	0.152	
F1	CL		S01147-S01157B		S07035-S07048	48.7	*-9.85***		-1.92	0.7711	0.0001	0.0293	2.93
	DTH		S09045-S09049		RM167-RM202	5.67			-1.3	0.0042	0.006	0.0781	7.81
	PN		RM428-RM259		RM4A-S12011B	5.85			-0.46	0.0014	0.0109	0.1182	32.92
			S03137-S03145		S08038-RM72	4.7			0.33	0.0014	0.0109	0.0608	
			S06019B-S06031		RM248-RM420	5.03	0.24**	-0.2*	-0.33	0.0322	0.0223	0.0608	
			S10019-S10026C		RM167-RM202	6.28			0.4	0.0068	0.002	0.0894	
	PL		RM1-S01027		S02000A-RM485	4.88			-0.52	0.0005	0.003	0.0823	12.4
			RM527-RM3183		RM270-RM235	5.5	-0.24*		-0.37	0.0175	0	0.0417	
	SN		S02085-S02088		S05000-RM267	4.75			7.3	0.0011	0.0022	0.0385	10.1
			S03010B-RM231		S10072-RM228	8.95	-7.16***	-4.23**	-6.71	0.0371	0.0129	0.0326	
			RM303-S04087A		RM31-RM334	6.15	-7.74***		-6.43	0.0433	0.0001	0.0299	
	SF		RM212-S01140		RM201-RM108	5.37			-4.86	0.0046	0.0004	0.0482	14.53
			S03033-S03024A		S11112-S11117B	4.69			3.37	0.0001	0.0036	0.0232	
			RM234-RM118		RM270-RM235	5.17			4.04	0.0023	0.0008	0.0333	
			S07101-S07103		S09065-S09075B	5.04			-4.46	0.0004	0.0057	0.0406	
	TGW		RM263-RM250		S03145-S03152B	5.74			0.39	0.0019	0.0137	0.0811	15.81
			S03145-S03152B		S11106-S11112	5.81			-0.38	0.0065	0	0.077	
	PYP		RM341-S02081B		RM480-S05116	4.86			-2.05	0.006	0	0.0476	8.55
			S03046-S03055		S06019B-S06031	4.95			-1.83	0.0001	0.0076	0.0379	
MPH	CL		S01158-S01160		S09049-S09055	5.44	-1.4*		-1.86	0.0406	0.0123	0.0717	7.17
	DTH		RM246-S01127		S09065-S09075B	5.74			-1.44	0.0003	0.0001	0.0477	13.43
			RM204-S06015		S08000-RM337	7.48			-1.67	0	0.0033	0.0641	
			RM527-RM3183		S07048-S07050A	33.33	-2.53***	-3.02***	0.99	0.1471	0.2096	0.0225	
	PL		RM492-RM71		S12029-RM277	5.36			0.57	0.0033	0.0131	0.1061	17.11
			S05030B-S05045		S05062-RM146	5.38			0.49	0.0005	0.0026	0.065	
	SF		RM1-S01027		S03164-RM85	6.18	3.18**		4.39	0.0167	0.0008	0.0318	14.62
			RM488-RM246		S12056-RM260	5.66			-4.12	0.0011	0.0012	0.028	
			S02085-S02088		RM481-S07024	7.41			-5.28	0.0017	0.0005	0.046	
			S03033-S03024A		S11112-S11117B	5.43			3.34	0.0004	0.0081	0.0184	
			RM489-S03020		RM50-RM527	17.78		10.25***	3.65	0.0025	0.1732	0.022	
	TGW		RM251-S03046		S11106-S11112	5.87			0.35	0.0111	0.0151	0.0944	19.43
			RM11-S07071		S11077-RM21	4.95			0.36	0	0.0062	0.0999	
	GYP		RM485-RM211		RM251-S03046	5.15			-2.02	0.0008	0.0006	0.0512	14.04
			S02010-S02020		S03136-S03137	5.58			2.02	0.0006	0	0.0512	
			S05087-S05095		S09034-RM105	6.89	-2.45***		1.74	0.0753	0.0029	0.038	

Suppl Table S3. Comparison of the heterosis QTLs in two indica-japonica RILs

	DT						MT					
Trait	QTL[a]	Chr.	Flanking markers	LOD[b]	a[c]	R^2(%)[d]	QTL[a]	Chr.	Flanking markers	LOD[b]	a[c]	R^2(%)[d]
CL							*qCL1.2*	1	S01143A-S01147	4.97	2.37	10.5
							qCL7.2	7	S07048-S07050A	3.76	1.99	7.3
	qCL9.1	9	S09000A-S09006	4.71	2.11	15.1						
PN							*qPN5.2*	5	RM163-S05087	3.27	0.38	7.5
PL	*qPL4.1*	4	S04077A-RM451	5.38	0.45	9.4						
							qPL4.2	4	S04120-S04128	7.58	0.57	11.7
							qPL7.1	7	S07035-S07048	7.68	0.59	12.8
	qPL8.1	8	RM25-RM72	7.83	0.58	15.4						
SN							*qSN1.1*	1	S01022-RM1	15.76	15.96	26.7
							qSN8.1	8	RM447-S08112	5.04	-7.21	5.4
	qSN9.1	9	S09000A-S09006	2.56	6.38	6.2						
TGW	*qTGW1.1*	1	RM297-S01140	6.12	0.53	13.4						
	qTGW3.3	3	S03099-S03115	2.8	0.47	10.4						
							qTGW3.1	3	S03145-S03152B	2.94	0.37	9.1
	qTGW4.1	4	S04077A-RM451	3.02	0.39	7.2						
	qTGW4.2	4	RM127-S04129B	3.44	-0.41	7.9						
	qTGW7.1	7	RM248-RM172	2.41	0.30	4.3						
							qTGW9.1	9	RM108-RM205	3.68	-0.41	11.1
	qTGW10.1	10	RM258-S10058A	3.02	0.36	6.4						
GYP							*qGYP1.2*	1	RM259-RM600	3.85	1.77	5.6
	qGYP5.1	5	S05014B-RM267	7.74	-2.72	16.0						
							qGYP5.1	5	S05095-RM480	6.95	2.43	10.6
							qGYP6.1	6	S06015-S06018	8.24	-2.86	14.6
							qGYP8.1	8	S08059-S08066	2.29	1.26	2.8
							qGYP10.1	10	S10019-S10026C	3.77	-1.80	5.8
PYP	*qPYP1.1*	1	S01140-S01143A	3.06	1.50	6.5						
							qPYP6.1	6	RM50-RM527	12.83	4.55	31.7
	qPYP7.1	7	RM234-S07101	3.97	1.69	8.3						
	qPYP8.2	8	S08090-S08106	2.97	1.71	8.5						
							qPYP11.1	11	S11112-S11117B	2.6	1.55	3.7

[a] See Table 1 for abbreviations.[b] LOD: logarithm of odds number[c] In the BC1F1s and MPH data set, QTL effects were estimated by the difference betwee

Suppl Table S4. Comparative studies on the identified heterosis QTLs in two indica-japonica RILs.

		Heterosis markers						IRGSP-1.0[e]		QTARO[f]							
Chr.	Source	QTL[a]	Chr.	Flanking markers	LOD[b]	a[c]	R^2(%)[d]	Start (bp)	Stop (bp)	Pop type	Start (kb)	Stop (kb)	Name	Trait	Parent A	Parent B	Reference
1	MT	*qSN1.1*	1	S01022-RM1	15.76	15.96	26.7	4387874	4636870	RIL	1039868	5759851		number of filled grain per paniucle	Zhenshan 97B	Milayng 46	Zhuang et al. 2000
										RIL	1405980	5759851	qFLL-1	first leaf length	Zhenshan 97B	Milayng 46	Shen et al. 2003
										RIL	1405980	5759851	qFLP-1	first leaf perimeter	Zhenshan 97B	Milayng 46	Shen et al. 2003
										F2	1887524	4635870	gp1a	Grains per panicle	Zhenshan 97B	Minghui 63	Yu et al. 1997
										BC1F5	3483439	7970819		Root dry weight	Akihikari	IRAT109	Horii et al. 2006
										BC1F5	3483439	10753685		Root axis length	Akihikari	IRAT109	Horii et al. 2006
										BC4F4	4424186	4424560	qPN1	Panicle per plant	Guichao 2	Chinese common wild rice (Oryza rufipogon Griff.)	Tian et al. 2006
										BC2F1	4424186	5941561	ph1.1	Plant height	IR 58025A	O. rufipogon (IC 22015)	Marri et al. 2005
										RIL	4635793	5759851	qTNSP-1-1	total number of spikelets per panicle	Zhenshan 97B	Milayng 46	Zhuang et al. 2002
	MT	*qGYP1.2*	1	RM259-RM600	3.85	1.77	5.6	7446642	9464788	BC1F5	3483439	7970819		Root dry weight	Akihikari	IRAT109	Horii et al. 2006
										BC1F5	3483439	10753685		Root axis length	Akihikari	IRAT109	Horii et al. 2006
										RIL	5094276	7970819	ppp1.1	panicle per plant	Milyang 23	Gihobyeo	Cho et al. 2007
										RIL	5094276	7970819	spp1.2	spikelets per panicle	Milyang 23	Gihobyeo	Cho et al. 2007
										F2	6273283	9865716	An9	Awned panicle	Taichung 65	O. meridionalis (Acc. W1625)introgression line	Matsushita et al. 2003
										F2	5941444	8139063	Rf	pollen sterility	IR75596A	IR68077-82-22-2-3R	Sattari et al. 2007
										RIL	5094276	7970819	prg1.2	percent ripened grain	Milyang 23	Gihobyeo	Cho et al. 2007
										RIL	5759741	39646396		number of filled grains per panicle	Zhenshan 97B	Milayng 46	Zhuang et al. 2001
	DT	*qTGW1.1*	1	RM297-S01140	6.12	0.53	13.4	32100610	34820971	RIL	5759741	39646396		number of filled grains per panicle	Zhenshan 97B	Milayng 46	Zhuang et al. 2001
	DT	*qPYP1.1*	1	S01140-S01143A	3.06	1.50	6.5	34820971	36282595	F2	28571547	36953571	An10	Awned panicle	Taichung 65	O. meridionalis (Acc. W1625)introgression line	Matsushita et al. 2003
										DHL	31822907	33817439	qCC-1	Chlorophyll content	ZYQ8	Jingxi 17	Teng et al. 2004
										DHL	32494603	32627034		adventitious root number(upland)	IR64	Azucena	Zheng et al. 2006
										DHL	33178792	34810544		Deep root per tiller	CT9993	IR62266	Kamoshita et al. 2002
										RIL	33817920	40288357	dth1.1	days to heading	Milyang 23	Gihobyeo	Cho et al. 2007
										F2, F3	34067651	36658883		number of filled grain per panicle	Tesanai 2	CB	Zhuang et al. 1996
										F2	34264553	36658883	ng1	Number of grains per panicle	Tesanai 2	CB	Lin et al. 1995
										F2	34264553	36658883	sf1	Spikelet fertility	Tesanai 2	CB	Lin et al. 1996
										BC2F1	34810383	38491404	sf1.1	spikelet fertility	IR 58025A	O. rufipogon (IC 22015)	Marri et al. 2005
	MT	*qCL1.2*	1	S01143A-S01147	4.97	2.37	10.5	36282595	38160493	BIL	35712600	39470731	qChll1a	chlorophyll contents	Nipponbare	Kasalath	Yang et al. 2003
										RIL	36226902	39470731	qLVBTS1-1	Number of large vascular bundles/Total spikelets per panicle	Zhenshan 97	Minghui 63	Cui et al. 2003
										RIL	36226902	39470731	qNSB1-1	number of secondary branches per panicle	Zhenshan 97A	Minghui 63	Cui et al. 2002
										RIL	36226902	39470731	qSSBp1-1	number of spikelets on secondary branches per panicle	Zhenshan 97A	Minghui 63	Cui et al. 2002
										RIL	36226902	39470731	yd1	yield	Zhenshan 97B	Minghui 63	Hua et al. 2002
										RIL	36226902	41822222	yd1b	yield	Zhenshan 97B	Minghui 63	Xing et al. 2002
										F2	36657777	40959893		white-berry kernels	CSSL(Koshihikari x Kasalath	Koshihikari	Takeshi et al. 2008
										RIL	36697294	39534042		spikelet fertility	Zhenshan 97B	Milyang 46	Zhuang et al. 2001
										DHL	36697294	42364623		Penetrated root thickness	IR64	Azucena	Zheng et al. 2000
										DHL	36697294	42364623	qPL-1	Panicle length	IR64	Azucena	Hittalmani et al. 2002
										BC2F2	36697294	42364623	pl1.1	Panicle length	Jefferson	O. rufipogon (IRGC 105491)	Thomson et al. 2003
										DHL	36697294	42364623		grain shape	IR64	Azucena	Huang et al. 1997
										DHL	36697294	42364623	fll1	flag leaf length	IR64	Azucena	Yan et al. 1999
										DHL	36697294	42364623	qNOP-1	Number of panicles	IR64	Azucena	Hittalmani et al. 2002
										DHL	36697294	42364623	tn1-4	tiller number	IR64	Azucena	Hittalmani et al. 2002
										DHL	36697294	42364623	ph1	plant height	IR64	Azucena	Yan et al. 1999
										DHL	36697294	42364623	Fh1-2	plant height	IR64	Azucena	Cao et al. 2001
										DHL	36697294	42364623	qPHT-1	Plant height	IR64	Azucena	Hittalmani et al. 2002
										DHL	36697294	42364623	qPHT1-1	Plant height	IR64	Azucena	Hittalmani et al. 2003
										DHL	**36697294**	**42364623**	**sd1**	**Plant height**	**IR64**	**Azucena**	**Li et al. 2003**
	DT	*qTGW3.3*	3	S03099-S03115	2.8	0.47	10.4	25041462	26658164	BC2F2	15401242	25890781	gw3.1	Grain weight	Jefferson	O. rufipogon (IRGC 105491)	Thomson et al. 2003
										BC3F2	16196565	25360678	An5(t)	Awnless	Asominori	IR24	Kubo et al. 2001
										CSSL	16196565	25360678	qGL-3	grain length	Asominori	IR24	Wan et al. 2005
										CSSL	16196565	25360678	qLWR-3	grain length-width ratio	Asominori	IR24	Wan et al. 2005
										F2	16840989	29580503		Mesocotyl length	Labelle	Black Gora	Redona et al. 1998
										RIL	18350854	28859103	qSV-3-1	Shoot dry weight	Lemont	Teqing	Zhang et al. 2005
										F2	**23850041**	**25360678**	**gw3a**	**Grain weight, g/1,000**	**Zhenshan 97A**	**Minghui 63**	**Yu et al. 1997**
										DHL	23850041	28999468	Yd3-13	Yield	IR64	Azucena	Yang et al. 2007
										F2	23850041	29580503		Panicle size	Labelle	Black Gora	Redona et al. 1998
										F2	23850041	31298638		Coleoptile length	Labelle	Black Gora	Redona et al. 1998
										F2	25876546	25884563	sh4	Shattering	Dinalaga	SR-5	Fukuta et al. 1998
										RIL, BC2F1	25891087	27899169	QFlw3	flag-leaf width	Lemont	Teqing	Mei et al. 2005
	MT	*qTGW3.1*	3	S03145-S03152B	2.94	0.37	9.1	32235745	33938972	DHL	31082622	35089139	qPES-3	Percentage of exserted stigmas	Zaiyeqing 8	Jingxi 17	Li et al. 2003
										RIL	31082622	37254205		grains per plant	Lemont	Teqing	Luo et al. 2007
										RIL	31082622	37254205	QFll3	flag leaf length	Lemont	Teqing	Mei et al. 2003
										RIL	31082622	37254205	QSn3	spikelet number per panicle	Lemont	Teqing	Mei et al. 2003
	DT	*qTGW4.1*	4	S04077A-RM451	3.02	0.39	7.2	25177554	28571472	RIL	21645173	34244441	gpp4	grains per panicle	9024	LH422	Xiao et al. 1996
	DT	*qPL4.1*	4	S04077A-RM451	5.38	0.45	9.4	25177554	28571472	RIL	22859833	27441315	qChla4-1	Chlorophyll a	Zhenshan 97A	Minghui 63	Cui et al. 2002
										RIL	22859833	27441315	qChlab4-1	Total Chlorophyll	Zhenshan 97A	Minghui 63	Cui et al. 2002
										RIL	22859833	27441315	qPH1-4-1	plant height at 35DAT	Zhenshan 97	Minghui 63	Cui et al. 2004
										CSSL	25273817	25274481	qGP4	grain number	Asominori	IR24	Fan et al. 2005
										BC2F2	25316661	33033092	pss4.1	Percent seed set	Jefferson	O. rufipogon (IRGC 105491)	Thomson et al. 2003
										RIL	27441052	27441315	qSLTS4-1	Area of -2nd leaf/Total spikelets per panicle	Zhenshan 97	Minghui 63	Cui et al. 2003
										RIL	27941367	30762314		Maximum new root length Average	Otomemochi	Yumenohatamochi	Ikeda et al. 2006
	MT	*qPL4.2*	4	S04120-S04128	7.58	0.57	11.7	33821212	34789152	F2	32246485	34252531		average primary branch number per panicle per plant	Palawan	IR42	Wu et al. 1996
										F2	32246485	34252531	QGn4	grain number per panicle	Lemont	Teqing	Li et al. 1997
										RIL	34553977	34561100	qSPR4	spreading of panicle at maturity stage	A58	W107 (o. rufipogon)	Onishi et al. 2007
										F2	34553977	35281498	Sh3	seed shattering	Taichung 65	n Griff. (Acc.IRGC105715)intrc	Nagai et al. 2002
										F2	32246485	34252531	np4	Number of panicles per plant	Waiyin 2	CB	Lin et al. 1995
										F2, F3	32246485	35283358		number of productive panicles per plant	Tesanai	CB	Zhuang et al. 1996
										F2	34553977	35281498	Sh3-gla	seed shattering	Taichung 65	. glaberrima (ACC IRGC10403	Nagai et al. 2002
										RIL	21645173	34244441	gpp4	grains per panicle	9024	LH422	Xiao et al. 1996
										F2	32246485	34252531	tgwt4	1000-grain weight	Tesanai 2	CB	Lin et al. 1995
										F2	32246485	34252531	np4	Number of panicles/plant	Waiyin 2	CB	Lin et al. 1996
										F2	31436862	34252531		chlorophyll content	IR42	Palawan	Wu et al. 1996
										F2	32246485	34252531	QGwp4	grain weight per panicle	Lemont	Teqing	Li et al. 1997
	DT	*qTGW4.2*	4	RM127-S04129B	3.44	-0.41	7.9	34714843	35012117	F2	34553977	35281498	Sh3	seed shattering	Taichung 65	n Griff. (Acc.IRGC105715)intrc	Nagai et al. 2002
										F2	34553977	35281498	Sh3-gla	seed shattering	Taichung 65	. glaberrima (ACC IRGC10403	Nagai et al. 2002
	DT	*qGYP5.1*	5	S05014B-RM267	7.74	-2.72	16.0	1515603	2881479	BIL	238143	3285751	CORN5	the ratio of Rubisco to total leaf N content at 5days after heading	Nipponbare	Kasalath	Ishimaru et al. 2001
										BC1F1	**836248**	**3445769**	**qSF5.2**	**hybrid fertility**	**Ilpumbyeo**	**Dasanbyeo**	**Reflinur et al. 2012**
										DHL	2069338	2760413		seminal root length(upland)	IR64	Azucena	Zheng et al. 2006
										DHL	2069338	2760413	Ph5-1	plant height	IR64	Azucena	Yan et al. 1998
										BC1F1	**2190812**	**2190895**	**qSS5 or S31(t)**	**hybrid sterility**	**Tuanguzao**	**Ketan Nangka**	**Li et al. 2005**
	MT	*qPN5.2*	5	RM163-S05087	3.27	0.38	7.5	19251933	21237962	RIL	18760746	19982059	dcs5	degree of chlorophyll content of the second leaf at the heading date	SNU-SG1	Milyang 23	Yoo et al. 2007
										F2, F3	18944261	21678878		1000 grain weight	Tesani	CB	Zhuang et al. 1996
										F2	18944261	29429411	QPI5	Spikelet density	Lemont	Teqing	Li et al. 1998
										DHL	19258755	28755091		grain width	Reiho	Yamadanishiki	Yoshida et al. 2002
										DHL	19258755	28755091		grain thickness	Reiho	Yamadanishiki	Yoshida et al. 2002
										F2	20217134	20220313	Sh5-glum	seed shattering	Taichung 65	). meridionalis introgression li	Sanchez et al. 2002
	MT	*qGYP5.1*	5	S05095-RM480	6.95	2.43	10.6	22871717	27376118	F2	18944261	29429411	QPI5	Spikelet density	Lemont	Teqing	Li et al. 2008
										DHL	19258755	28755091		grain width	Reiho	Yamadanishiki	Yoshida et al. 2002
										DHL	19258755	28755091		grain thickness	Reiho	Yamadanishiki	Yoshida et al. 2002
										F2	23597602	29429411	QFla5	flag leaf angle	Lemont	Teqing	Li et al. 1999
										F2	23655231	23802397	Eui	elongated uppermost internode	307T	Zhenshan 97	Xu et al. 2004
										RIL	24086072	27457701	qRGR-5	Relative germination rate(RGR)	Zhenshan 97	IRAT109	You et al. 2006
										RIL	26972040	27060414	qml5-4	mesocotyl length	Zhenshan 97B	Milyang 46	Ouyang et al. 2005
										RIL	27056983	27486349	qRDW5-1	Root dry weight	Zhenshan 97	Minghui 63	Cui et al. 2002
										RIL	27056983	27486349	qRA5-1	Root activity	Zhenshan 97	Minghui 63	Cui et al. 2002
										RIL	27056983	27486349	qGR5-1	Germination rate	Zhenshan 97	Minghui 63	Cui et al. 2002
	MT	*qGYP6.1*	6	S06015-S06018	8.24	-2.86	14.6	4194946	4738670	BC4F2	2684129	4352379	Lhd1(t)	Flowering	RGC Acc. No. 10566	Taichung 65	Sanchez et al. 2002
										BC1F1	2853061	4303488	d4	Dwarf	H125	Kasalath	Maekawa et al. 2005

									RIL	3168374	4234201	qSLL-6	second leaf length	Zhenshan 97B	Milyang 46	Shen et al. 2003
									RIL	3459492	6023472		total number of spikelets per panicle	Zhenshan 97B	Milyang 46	Zhuang et al. 2001
									RIL	3459492	6023472		Grain yield	Zhenshan 97B	Milyang 46	Zhuang et al. 2001
									RIL	3459492	6023472		spikelet fertility	Zhenshan 97B	Milyang 46	Zhuang et al. 2001
										4200251	**4201852**	**DPL2**	**Sterility**			**Mizuta et al. 2010**
									RIL	4212289	4899565	qNP-6	number of panicles per plant	Zhenshan 97B	Milyang 46	Zhuang et al. 2002
									BC1F1	4234080	5096867	qLW-6	Grain shape	Balilla	NTH	Yan et al. 2003
									BC1F1	**4234080**	**5096867**	**qSPTF6**	**spikelet fertility**	**Balilla**	**NTH**	**Yan et al. 2003**
									BC1F2	4234080	6399814	qRCRJ-6	Reduction in chlorophyll content	IR36	Nekken2	Abdelkhalik et al. 2005
MT	*qPYP6.1*	6	RM50-RM527	12.83	4.55	31.7	6376948	9863522	BC1F2	4234080	6399814	qRCRJ-6	Reduction in chlorophyll content	IR36	Nekken2	Abdelkhalik et al. 2005
									F2	6023974	9537572	tns6	Total number of spikelets per panicle	Tesanai 2	CB	Lin et al. 1995
									F2	6023974	9537572	sd6	Spikelet density	Tesanai 2	CB	Lin et al. 1995
									F2	6023974	9537572	tns6	Total number of spikelets/panicle	Waiyin 2	CB	Lin et al. 1996
									DHL	6230045	7592308		the spikelet number of a panicle	Zhenshan 97	Wuyujing 2	Jiang et al. 2004
										6283432	**7177183**	**spf6**	**Spikelet fertility**	**02428/Nanjing12**	**Balilla**	**Song et al. 2005**
									TCF1	**6283432**	**9284248**	**S5**	**spikelet fertility**	**Nanjing11**	**Duiai**	**Yan et al. 2000**
									RIL	6521345	6927968	qNPB6-1	number of primary branches per panicle	Zhenshan 97	Minghui 63	Cui et al. 2002
									RIL	6720901	8066362	qPSP-6	photoperiod sensitive phase	O. rufipogon(W1944	Pei-Khu	Cai and Morishima 1998
									RIL	6927624	20691040	gp6	Grains/panicle	Zhenshan 97	Minghui 63	Hua et al. 2002
									RIL	6927624	20691040	qLVBSL6-1	ɔer of large vascular bundles/Area of -2n	Zhenshan 97	Minghui 63	Cui et al. 2003
									RIL	6927624	20691040	qRS6-1	Reducing sugar content of seedling	Zhenshan 97	Minghui 63	Cui et al. 2002
									RIL	6927624	20691040	qGY6-1	Grain yield (t/ha)	Zhenshan 97	Minghui 63	Cui et al. 2003
									RIL	6927624	20691040	qSL6-1	Area of -2nd leaf (cm2)	Zhenshan 97	Minghui 63	Cui et al. 2003
									RIL	6927624	20691040	qTN2-6-1	tiller number at maturity	Zhenshan 97	Minghui 63	Cui et al. 2004
									RIL	6927624	20691040	qPH2-6-1	plant height at maturity	Zhenshan 97	Minghui 63	Cui et al. 2004
									RIL	6927624	20691040	qHD-6-1	heading date	Zhenshan 97	Minghui 63	Cui et al. 2004
									RIL	6927624	29906021	ph6	plant height	9024	LH422	Xiao et al. 1996
									DHL	7592048	8751554		the number of grains per panicle (GP)	Zhenshan 97	Wuyujing 2	Jiang et al. 2004
									DHL	7592048	8751554		the effective tiller percentage per plant(TP	Zhenshan 97	Wuyujing 2	Jiang et al. 2004
									BIL	8054255	8066362	qIN6-6	6th internode length	Koshihikari	Kasalath	Yamamoto et al. 2001
									BIL	8054255	8066362	qDTH-6	days-to-heading	Koshihikari	Kasalath	Yamamoto et al. 2001
										8054255	8066362	Su-Se-1(t)	inant photoperiod-sensitive suppression	Asominori	IR24	Yu et al. 2005
									RIL	8751256	12402719	qNFGP-6	number of filled grains per panicle	Zhong 156	Gumei 2	Zhuang et al. 2001
									RIL	9282143	17933378	qSPN-6	Number of spikelets per panicle	ZYQ8	Jingxi 17	He et al. 2001
									DHL	9282143	17933378	gw-6	1000-grain weight	Zaiyeqing 8	Jingxi 17	Lu et al. 1996
MT	*qPL7.1*	7	S07035-S07048	7.68	0.59	12.8	4548938	8489441	F2	2349842	17535483	gp7a	Grains/panicle	Zhenshan 97	Minghui 63	Li et al. 2000
MT	*qCL7.2*	7	S07048-S07050A	3.76	1.99	7.3	8489285	14533332	F2	2349842	17535483	gw7	1000 Grain weight	Zhenshan 97	Minghui 63	Li et al. 2000
									F2	2349842	17535483	yd7a	Yield per plant	Zhenshan 97	Minghui 63	Li et al. 2000
									F2	2349842	17535483	tp7b	Tillers/plant	Zhenshan 97	Minghui 63	Li et al. 2000
									F2	4606397	6812968	QHd7	heading date	IR64	Azucena	Li et al. 2003
									DHL	4606397	16264722	qah7	length of the heading period	Nipponbare	Kasalath	Ishimaru and Kashiwagi, 2004
									BIL	4606397	17535483		heading date	Hoshinoyume	Kasalath	Nonoue et al. 2008
									F2	5512628	5512754	dth7.1	Days to heading	IR64	O. rufipogon (IRGC 105491)	Septiningsih et al. 2003
									BC2F2	5512628	19619933	qHd-7	heading date	USSR5	N22	Jiang et al. 2007
									F2	5884863	6812968	pms1	ɔhtoperiod-sensitivite genetic male sterilit	Minghui 63	32001S	Liu et al. 2001
									F2	**8358800**	**11394315**	**Hd4**	**days to heading**	**Nipponbare**	**NIL (Hd4)**	**Lin et al. 2003**
									BC3F2	8910286	11394315	qSSP7	number of spikelets per panicle	Zhenshan 97	Minghui 63	Xing et al. 2008
									RIL	11391449	11394315	qHD-1	days to heading	A58	W107 (o. rufipogon)	Onishi et al. 2007
DT	*qPYP7.1*	7	RM234-S07101	3.97	1.69	8.3	25473682	26850045	RIL	18481047	25763098	QRl7	leaf rolling	Lemont	Teqing	Xu et al. 1999
									RIL	19354374	26133946	qSDS-7-2	Seed dormancy	EM93-1	SS18-2	Gu et al. 2004
									BC1F1	24746657	26133946	7-3	ss,maximum root length,number of roots	Bala	Azucena	Price et al. 2002
									BC1F1	**26133781**	**30222602**	**qPLLN7**	**Pollen fertility**	**Balilla**	**NTH**	**Yan et al. 2003**
									F3	**26313662**	**27191049**	**hd7a**	**Heading date**	**Zhenshan 97**	**Minghui 63**	**Yu et al. 2002**
DT	*qTGW7.1*	7	RM248-RM172	2.41	0.30	4.3	29341016	29562443	**BC4F2**	**27188091**	**30322668**	**S23(t)**	**Sterility**	**RGC Acc. No. 10566**	**Taichung 65**	**Sobrizal et al. 2000**
									BIL	27391198	29608218	qDTH-7	day to heading	Hayamasari	Italica Livorno	Fujino and Sekiguchi, 2005
DT	*qPL8.1*	8	RM25-RM72	7.83	0.58	15.4	4378457	6763721	**F2**	**360155**	**4446617**	**qPL8**	**Panicle length**	**98SQ1496**	**Koshihikari**	**Miyata et al. 2007**
										4333717	**4335434**	**RH8**	**heading date and heterosis**			**Li et al. 2016**
									F2	360155	4446617	qDTH8	Days to heading	98SQ1496	Koshihikari	Miyata et al. 2007
									F2	4105519	5425677		Grain weight	Labelle	Black Gora	Redona et al. 1998
									RIL	4105519	25684949	dth8	Days to heading	9024	LH422	Xiao et al. 1996
									BC	**4444681**	**4446617**	**Hd5**	**Days to heading**	**Nipponbare**	**Hd5-NIL**	**Lin et al. 2003**
									F2	5421262	7568613	nfb8	Number of first branches per panicle	Waiyin 2	CB	Lin et al. 1995
									F2	5421262	17528755	hd8	heading date	Tesani 2	CB	Lin et al. 1995
MT	*qGYP8.1*	8	S08059-S08066	2.29	1.26	2.8	17208768	19037716	RIL	4105519	25684949	dth8	Days to heading	9024	LH422	Xiao et al. 1996
									F2	5421262	17528755	hd8	heading date	Tesani 2	CB	Lin et al. 1995
DT	*qPYP8.2*	8	S08090-S08106	2.97	1.71	8.5	23212684	25906367	RIL	4105519	25684949	dth8	Days to heading	9024	LH422	Xiao et al. 1996
									BIL	19395396	24277473		Rubisco protein content at 5days after heac	Nipponbare	Kasalath	Ishimaru et al. 2001
									BC3F2	20740779	24569536	qPN-8	Panicles per plant	Milyang 23	Oryza glaberrima (accession IRGC No. 103544)	Suh et al. 2005
									RIL	24274675	27825769	8-4	root to shoot ratio,maximum root length	Bala	Azucena	Price et al. 2002
										25362546	**25366701**	**WFP**	**Panicle branching. Tillering.**	**ST12**		**Miura et al. 2010**
									F2, F3	25681306	27825769		filled grain weight per plant	Tesani	CB	Zhuang et al. 1996
MT	*qSN8.1*	8	RM447-S08112	5.04	-7.21	5.4	26549705	27060006	RIL	24274675	27825769	8-4	root to shoot ratio,maximum root length	Bala	Azucena	Price et al. 2002
									F2, F3	25681306	27825769		filled grain weight per plant	Tesani	CB	Zhuang et al. 1996
									RIL	26582935	28166213	qRGV-8	Relative germination vigor	Zhenshan 97	IRAT109	You et al. 2006
DT	*qCL9.1*	9	S09000A-S09006	4.71	2.11	15.1	245509	6329420	DH	1159676	11367960		Maximum root length	ZYQ8	Jingxi 17	Xu et al. 2001
DT	*qSN9.1*	9	S09000A-S09006	2.56	6.38	6.2	245509	6329420								
MT	*qTGW9.1*	9	RM108-RM205	3.68	-0.41	11.1	19304828	22721282	F2	18374393	19465043	qGL9	Grain length	98SQ1496	Koshihikari	Miyata et al. 2007
									BC1F2	18374393	20828859	qCCAI-9	f chlorophyll content 25 days after flower	IR36	Nekken2	Abdelkhalik et al. 2005
									DHL	19168716	20079157	ta9	tiller angle	IR64	Azucena	Yan et al. 1999
									F2	19168716	21314308	Ta1	tiller, leaf and flag leaf angles	Lemont	Teqing	Li et al. 1998
									F2	19168716	21314308	Ta	tillering angle	Lemont	Teqing	Li et al. 1999
									RIL	19464779	22021406	gy9	grain yield	Dasanbyeo	TR22183	Cho et al. 2007
									BC2F1	19464779	23552932	yldp9.1	Yield per plant	IR 58025A	O. rufipogon (IC 22015)	Marri et al. 2005
									F2	20442345	20828859	qMXN-9	number of late metaxylem vessels	IR 64	Kinandang Patong	Uga et al. 2008
									RIL	20442345	21379666		No. of new roots	Otomemochi	Yumenohatamochi	Ikeda et al. 2006
									RIL	20600863	21314308	pl9	panicle length	Zhenshan 97	Minghui 63	Xing et al. 2001
									BC3F2	21109960	22690613	Spk(t)	spread stub	Nipponbare	Kasalath	Yamamoto et al. 1997
									RIL	21313734	23027968		Maximum root length	IAC165	Co39	Courtois et al. 2003
									F2	21504897	21615388	Tac1	tiller angle	IR24	Introgressed line (Asominori)	Yu et al. 2007
									RIL	22021233	23027968	qTN-9-2	Tiller number	Zhenshan 97	Minghui 63	Yang et al. 2006
									RIL	22021233	23552932		Maximum new root length NF-C	Otomemochi	Yumenohatamochi	Ikeda et al. 2006
MT	*qGYP10.1*	10	S10019-S10026C	3.77	-1.80	5.8	10630547	13926502	BC2F1	845399	21629868		pollen fertility	Taichung 65	. glaberrima (ACC IRGC10403	Doi et al. 1998
									BC1F1	1928434	12043918		Pollen fertility	RD21A	IR24	Tan et al. 1998
									RIL	9888577	15136649	qSPBp10-2	er of spikelets on primary branches per p	Zhenshan 97	Minghui 63	Cui et al. 2002
									RIL	9888577	15136649	qSPB2-1	spikelets on primary branches per prima	Zhenshan 97	Minghui 63	Cui et al. 2002
									RIL	12044545	19623828	ssd10	spikelets setting density	9024	LH422	Xiao et al. 1996
									RIL	13111494	14711256	Phyllochron	Phyllochron	IR36	Genjah Wangkal (IRGC 35652	Miyamoto et al. 2004
DT	*qTGW10.1*	10	RM258-S10058A	3.02	0.36	6.4	18085497	20173526	BC2F1	845399	21629868		pollen fertility	Taichung 65	. glaberrima (ACC IRGC10403	Doi et al. 1998
									RIL	12044545	19623828	ssd10	spikelets setting density	9024	LH422	Xiao et al. 1996
									RIL	16938289	18543072	qLVB10-1	Number of large vascular bundles	Zhenshan 97	Minghui 63	Cui et al. 2003
									RIL	16938289	18543072	qLSVB10-1	No. of large stem vascular bundles	Zhenshan 97	Minghui 63	Cui et al. 2003
									BC3F2	18542704	18543072	qCL-10	Culm length	Milyang 23	aberrima (accession IRGC No.	Suh et al. 2005
									BIL	19577439	22899293		frequency of pre-flowering floret abortior	Akihikari	IRAT109	Yamagishi et al. 2004
									RIL	19738642	22303661		1000-grain weight	Zhenshan 97B	Milyang 46	Zhuang et al. 2001
MT	*qPYP11.1*	11	S11112-S11117B	2.6	1.55	3.7	27176710	28893430	**F2**	**24948460**	**28848614**	**FON3**	**floral organ number**	**9311**	**ι3 mutant from Guguanghu**	**Jiang et al. 2007**

[a] See Table 1 for abbreviations.[b] LOD: logarithm of odds number[c] In the BC1F1s and MPH data set, QTL effects were estimated by the difference between heterozygote and the homozygote (the heterozygotes - the homozygotes). [d] R^2(%): effectiveness of QTLs

[e] GRAMENE Blast (ensembl.gramene.org; Dec, 2015). [f] QTARO -QTL/gene database for rice (http://qtaro.abr.affrc.go.jp/).

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Suppl Table S5. Percent additive effect of each yield-related traits to its parent haplotype (AiAi) and yield traits in BCF1 of MT-RILs.

							PN		SN		SF		TGW		GYP		PYP	
Populatior	QTL	Marker	Haplotype			n	A (%)	P (T<t)	A (%)	P (T<t)	A (%)	P (T<t)	A (%)	P (T<t)	A (%)	P (T<t)	A (%)	P (T<t)
MT	*qGYP1.2*	RM259	AiAi	RM600	AiAj	15	1.41	0.331	6.36	0.142	1.48	0.447	-2.18	0.111	7.35	0.197	6.39	0.132
			AiAj		AiAi	10	-0.79	0.438	-1.56	0.399	15.51	0.121	-1.03	0.325	15.73	0.062	-0.62	0.456
			AiAj		AiAj	64	**7.04**	0.003	**-12.10**	0.000	**19.66**	0.001	0.39	0.354	**10.14**	0.015	**-7.47**	0.023
	qGYP5.1	S05095	AiAi	RM480	AiAj	20	-1.96	0.278	4.03	0.177	0.29	0.488	**-2.94**	0.024	0.52	0.469	-0.80	0.442
			AiAj		AiAi	21	-0.08	0.490	2.68	0.309	1.06	0.451	**-3.87**	0.003	1.61	0.401	-0.84	0.439
			AiAj		AiAj	48	3.62	0.078	2.28	0.260	10.38	0.051	**-3.18**	0.001	**12.70**	0.004	-0.98	0.396
	qGYP6.1	S06015	AiAi	S06018	AiAj	1	-1.99	n.a.	7.61	n.a.	1.37	n.a.	4.00	n.a.	4.26	n.a.	2.09	n.a.
			AiAj		AiAi	7	3.84	0.185	14.82	0.081	**-25.43**	0.000	3.77	0.052	-5.79	0.150	**26.13**	0.006
			AiAj		AiAj	103	2.41	0.165	**13.51**	0.000	**-36.74**	0.000	1.22	0.126	**-18.46**	0.000	**30.69**	0.000
	qPYP6.1	RM50	AiAi	RM527	AiAj	9	4.00	0.207	**20.59**	0.005	**-27.18**	0.009	-0.92	0.275	-8.79	0.198	**26.69**	0.003
			AiAj		AiAi	23	-2.19	0.240	**16.64**	0.000	**-33.69**	0.000	1.48	0.156	**-16.45**	0.000	**24.27**	0.000
			AiAj		AiAj	53	-2.50	0.133	**19.35**	0.000	**-35.15**	0.000	-0.76	0.228	**-13.81**	0.000	**33.29**	0.000
	qGYP8.1	S08059	AiAi	S08066	AiAj	5	3.95	0.176	-7.58	0.149	-17.53	0.135	0.47	0.170	-19.10	0.290	2.27	0.435
			AiAj		AiAi	3	6.62	0.253	-4.98	0.229	29.88	0.091	-3.74	0.286	25.63	0.164	-8.21	0.202
			AiAj		AiAj	75	-0.83	0.352	**-7.10**	0.010	**12.02**	0.019	-0.16	0.433	3.58	0.191	**-8.97**	0.003
	qGYP10.1	S10019	AiAi	S10026C	AiAj	5	**-12.34**	0.048	13.36	0.143	-4.86	0.423	-4.59	0.130	-7.36	0.323	1.73	0.437
			AiAj		AiAi	12	-2.52	0.295	-1.40	0.380	-2.90	0.388	-2.44	0.113	-10.85	0.109	**-10.79**	0.017
			AiAj		AiAj	53	0.93	0.338	-4.44	0.085	0.49	0.467	0.51	0.310	-6.06	0.069	**-6.11**	0.043
	qPYP11.1	S11112	AiAi	S11117B	AiAj	3	-4.33	0.291	-1.85	0.446	**-32.73**	0.000	-0.36	0.406	-23.57	0.065	9.27	0.269
			AiAj		AiAi	3	-6.31	0.091	1.52	0.412	-4.00	0.441	-4.41	0.110	-14.29	0.209	-9.13	0.223
			AiAj		AiAj	61	-2.03	0.173	0.15	0.481	**-11.72**	0.015	-0.17	0.427	**-6.79**	0.049	**7.26**	0.025

[a] percent additive effect of the coresponding haplotype to its parent haplotype (AiAi)

[b] probability of significance assuming H_0=0 by Student's t-test.

Suppl Table S6. Standardized direct effect of yield-related traits to yield in MT-RILs.

QTL	Allele type	DTH	PN	SN	SF	TGW	Most positively effective trait (>0.5 or <-0.5)
qGYP1.2	AiAi/AiAi	-0.027	0.268	0.473	0.897	0.157	SF
	AiAi/AiAj	0.029	-0.104	0.237	1.073	0.233	SF
	AiAj/AiAi	0.388	0.145	0.051	0.897	0.093	SF
	AiAj/AiAj	-0.029	0.263	0.541	0.936	0.185	SN/SF
qGYP5.1	AiAi/AiAi	0.023	0.192	0.359	0.98	0.073	SF
	AiAi/AiAj	-0.03	0.192	0.428	0.911	0.199	SF
	AiAj/AiAi	0.347	0.475	0.335	1.077	0.083	SF
	AiAj/AiAj	0.02	0.254	0.495	0.953	0.146	SF
qPYP6.1	AiAi/AiAi	-0.005	0.271	0.665	-0.336	0.291	SN
	AiAi/AiAj	0.679	0.698	-0.087	-0.515	1.027	DTH/PN/TGW, (SF)
	AiAj/AiAi	0.191	0.746	0.469	-0.288	0.292	PN
	AiAj/AiAj	-0.157	0.34	0.58	-0.467	0.086	SN
qGYP8.1	AiAi/AiAi	0.019	0.303	0.394	0.968	0.204	SF
	AiAi/AiAj	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAi	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAj	0.043	0.208	0.424	0.933	0.021	SF
qPYP11.1	AiAi/AiAi	-0.024	0.292	0.595	-0.408	0.137	SN
	AiAi/AiAj	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAi	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAj	0.154	0.271	0.445	-0.478	0.165	
qGYP6.1	AiAi/AiAi	0.044	0.175	0.424	0.907	0.049	SF
	AiAi/AiAj	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAi	-0.014	-0.562	0.813	-0.572	1.475	SN/TGW, (SF)
	AiAj/AiAj	0.102	0.289	0.41	0.813	0.162	SF
qGYP10.1	AiAi/AiAi	0.183	0.338	0.355	0.951	0.115	SF
	AiAi/AiAj	n.a.	n.a.	n.a.	n.a.	n.a.	
	AiAj/AiAi	0.203	0.449	0.485	1.094	0.35	SF
	AiAj/AiAj	-0.162	0.137	0.545	0.984	0.159	SN/SF

[a] effective trait below -0.5 in parenthesis