

Appendix

Appendix 1 Allele frequencies of eight cultivated and three wild rice genotypes evaluated with 8 microsatellite loci.

Locus	Cultivated rice								Wild rice		
	CNT1	SPR1	KDML105	RD6	RD10	NSPT	SMJ	KDK	LP	KC	NY
RM1											
Fragment size (bp)											
77.5	0	0	0	0	0	0	0	0	0	0.3	0
80.5	0	0	0	0	0	0	0	0	0.1	0	0
82.5	0	0	0	0	0	0	0	0	0.3	0	0
87.5	0	0	0	0	0	0	0	0	0	0.2	0
91	0	0	0	0	0	0	0	0	0.2	0	0
92	0	0	0	0	0	0	0	0	0.2	0	0
93	0	0	0	0	0	0	0	0	0	0.4	0.6
95	0	0	0	0	1	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0	0	0.2	0.0	0.3
100	1	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	1	0	0	0	0
105	0	1	0	0	0	0	0	0	0	0	0
110	0	0	1	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	1	0	0	0
118	0	0	0	1	0	1	0	0	0	0.1	0.1
RM 164											
Fragment size (bp)											
242.5	1	0	0	0	0	1	0	0	0	0	0
250	0	0	0	0	1	0	1	0	0	0	0
255.5	0	0	1	1	0	0	0	0	0	0	0
259	0	0	0	0	0	0	0	0	0	0	0.3
263	0	1	0	0	0	0	0	0	0	0	0
264.5	0	0	0	0	0	0	0	0	0	0.8	0.2
272	0	0	0	0	0	0	0	0	0	0.2	0.1
277.5	0	0	0	0	0	0	0	0	0	0	0.3
282	0	0	0	0	0	0	0	0	0.5	0	0
285	0	0	0	0	0	0	0	0	0.4	0	0
295	0	0	0	0	0	0	0	0	0	0	0.1
300	0	0	0	0	0	0	0	1	0	0	0
RM 167											
Fragment size (bp)											
122.5	1	1	1	1	1	1	1	0	0	0	0
125	0	0	0	0	0	0	0	0	0	1	0.9
134.5	0	0	0	0	0	0	0	0	0.3	0	0
140	0	0	0	0	0	0	0	0	0.2	0	0
145	0	0	0	0	0	0	0	1	0	0	0
150	0	0	0	0	0	0	0	0	0.5	0	0.1

Appendix 1 (continue).

Locus	Cultivated rice								Wild rice		
	CNT1	SPR1	KDML105	RD6	RD10	NSPT	SMJ	KDK	LP	KC	NY
RM 211											
Fragment size (bp)											
142.5	0	1	1	1	1	1	1	0	0	0	0
145	0	0	0	0	0	0	0	0	0.6	0	0.1
147.5	0	0	0	0	0	0	0	0	0	0	0.9
150	0	0	0	0	0	0	0	0	0.4	0	0
152.5	0	0	0	0	0	0	0	0	0	0.7	0
153	0	0	0	0	0	0	0	0	0	0.1	0
155	1	0	0	0	0	0	0	1	0	0	0
160	0	0	0	0	0	0	0	0	0	0.2	0
RM 225											
Fragment size (bp)											
125	0	1	0	0	0	0	0	0	0.3	0	0
127.5	0	0	0	0	0	0	0	0	0.1	0.6	0
132.5	0	0	0	0	0	0	0	0	0.4	0	0
135	0	0	0	0	0	0	0	0	0.1	0	0
137.5	0	0	0	0	0	0	0	0	0	0.4	0
140	1	0	1	0	1	0	1	0	0.2	0	0.1
145	0	0	0	1	0	1	0	1	0	0	0.9
RM 341											
Fragment size (bp)											
115	0	0	0	0	0	0	0	0	0.3	0	0
117.5	0	0	0	0	0	0	0	0	0.3	0	0
122.5	0	0	0	0	0	0	0	0	0.1	0	0
125	0	0	0	0	0	0	0	0	0.1	0	0
137.5	0	0	0	0	0	0	0	0	0.2	0	0
138	0	0	0	0	0	0	0	0	0.1	0	0
142.5	0	0	0	0	0	0	0	0	0	0	0.8
147.5	1	0	0	0	0	1	0	0	0	0	0
150	0	0	0	0	1	0	0	1	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0.6	0
165	0	1	0	0	0	0	1	0	0	0	0
170	0	0	1	1	0	0	0	0	0	0	0.2
175	0	0	0	0	0	0	0	0	0	0.4	0
RM 588											
Fragment size (bp)											
114	0	0	0	0	0	0	0	0	0.1	1	0.8
117	1	1	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0.4	0	0
121	0	0	0	0	0	0	0	0	0.5	0	0
130	0	0	1	1	1	1	1	1	0	0	0.2

Appendix 2 Genotype frequencies of eight cultivated and three wild rice genotypes evaluated with 8 microsatellite loci.

Locus	Cultivated rice								Wild rice		
	CNT1	SPR1	KDML105	RD6	RD10	NSPT	SMJ	KDK	LP	KC	NY
RM1											
1/1	1	0	0	0	0	0	0	0	0	0	0
2/2	0	1	0	0	0	0	0	0	0	0	0
3/3	0	0	1	0	0	0	0	0	0	0	0
4/4	0	0	0	1	0	1	0	0	0	0	0
5/5	0	0	0	0	1	0	0	0	0	0	0
6/6	0	0	0	0	0	0	1	0	0	0	0
7/7	0	0	0	0	0	0	0	1	0	0	0
8/8	0	0	0	0	0	0	0	0	0.1	0.1	0
9/9	0	0	0	0	0	0	0	0	0.1	0.6	0.4
10/10	0	0	0	0	0	0	0	0	0.3	0	0
11/11	0	0	0	0	0	0	0	0	0.4	0.2	0
12/12	0	0	0	0	0	0	0	0	0.1	0	0
13/13	0	0	0	0	0	0	0	0	0	0	0.3
14/14	0	0	0	0	0	0	0	0	0	0	0.2
4/9	0	0	0	0	0	0	0	0	0	0.1	0.1
RM164											
1/1	1	0	0	0	0	0	0	0	0	0	0
2/2	0	1	0	0	0	1	0	0	0	0	0
3/3	0	0	1	1	0	0	0	0	0	0	0
4/4	0	0	0	0	1	0	1	0	0	0	0
5/5	0	0	0	0	0	0	0	1	0	0	0
6/6	0	0	0	0	0	0	0	0	0.5	0	0
7/7	0	0	0	0	0	0	0	0	0.1	0	0
8/8	0	0	0	0	0	0	0	0	0.4	0.4	0.1
9/9	0	0	0	0	0	0	0	0	0	0	0.2
10/10	0	0	0	0	0	0	0	0	0	0	0.4
11/11	0	0	0	0	0	0	0	0	0	0	0.1
12/12	0	0	0	0	0	0	0	0	0	0.6	0
8/9	0	0	0	0	0	0	0	0	0	0	0.2
RM167											
1/1	1	1	1	1	1	1	1	0	0	0	0
2/2	0	0	0	0	0	0	0	1	0	0	0
3/3	0	0	0	0	0	0	0	0	0.5	0	0
4/4	0	0	0	0	0	0	0	0	0.2	0	0
5/5	0	0	0	0	0	0	0	0	0.3	0	0
6/6	0	0	0	0	0	0	0	0	0	0.9	1
3/6	0	0	0	0	0	0	0	0	0	0.1	0

Appendix 2 (continue).

Locus	Cultivated rice								Wild rice		
	CNT1	SPR1	KDML105	RD6	RD10	NSPT	SMJ	KDK	LP	KC	NY
RM211											
1/1	1	0	1	1	1	1	1	0	0	0	0
2/2	0	1	0	0	0	0	0	1	0	0	0
3/3	0	0	0	0	0	0	0	0	0.6	0	0.1
4/4	0	0	0	0	0	0	0	0	0.4	0	0
5/5	0	0	0	0	0	0	0	0	0	0	0.9
6/6	0	0	0	0	0	0	0	0	0	0.7	0
7/7	0	0	0	0	0	0	0	0	0	0.2	0
8/8	0	0	0	0	0	0	0	0	0	0.1	0
RM225											
1/1	1	1	0	0	1	0	1	0	0.1	0	0.1
2/2	0	0	1	0	0	0	0	0	0	0	0
3/3	0	0	0	1	0	1	0	1	0	0	0.9
4/4	0	0	0	0	0	0	0	0	0.4	0	0
5/5	0	0	0	0	0	0	0	0	0.1	0	0
6/6	0	0	0	0	0	0	0	0	0.2	0	0
7/7	0	0	0	0	0	0	0	0	0	0	0
8/8	0	0	0	0	0	0	0	0	0	0.5	0
9/9	0	0	0	0	0	0	0	0	0	0.3	0
1/6	0	0	0	0	0	0	0	0	0.1	0	0
6/7	0	0	0	0	0	0	0	0	0.1	0.2	0
RM341											
1/1	1	0	0	0	0	0	0	0	0	0	0
2/2	0	1	0	0	0	1	0	0	0	0	0.2
3/3	0	0	1	1	0	0	1	0	0	0	0
4/4	0	0	0	0	1	0	0	1	0	0	0
5/5	0	0	0	0	0	0	0	0	0.3	0	0
6/6	0	0	0	0	0	0	0	0	0.2	0	0
7/7	0	0	0	0	0	0	0	0	0.1	0	0
8/8	0	0	0	0	0	0	0	0	0.1	0	0
9/9	0	0	0	0	0	0	0	0	0.1	0	0
10/10	0	0	0	0	0	0	0	0	0.1	0	0
11/11	0	0	0	0	0	0	0	0	0	0	0
12/12	0	0	0	0	0	0	0	0	0	0	0.8
13/13	0	0	0	0	0	0	0	0	0	0.6	0
14/14	0	0	0	0	0	0	0	0	0	0.4	0
8/11	0	0	0	0	0	0	0	0	0.1	0	0
RM588											
1/1	1	0	0	1	1	1	1	1	0	0	0
2/2	0	1	1	0	0	0	0	0	0	0	0
3/3	0	0	0	0	0	0	0	0	0.5	0	0
4/4	0	0	0	0	0	0	0	0	0.4	0	0
5/5	0	0	0	0	0	0	0	0	0.1	0	0
6/6	0	0	0	0	0	0	0	0	0	0.2	0
7/7	0	0	0	0	0	0	0	0	0	0.8	1

Appendix 3 Segregation of leaf-blade color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P					
			Green	Purple							
<i>Cultivated x KC wild rice</i>											
CNT1 x KC	no segregation observed										
SPR1 x KC	no segregation observed										
KDML105 x KC	no segregation observed										
RD6 x KC	no segregation observed										
KDK x KC	1	3:1	Obs.	150	31	3.2	0.07				
			Exp.	139.5	46.5						
<i>Cultivated rice x NY wild rice</i>											
CNT1 x NY											
SPR1 x NY											
KDML105 x NY	1	3:1	Obs.	134	2	40.2	<0.001				
			Exp.	102	34						
			2	15:1	Exp.			127.5	8.5	5.3	0.02
			3	63:1	Exp.			133.8	2.2	0.007	0.93
RD6 x NY	no segregation observed										
KDK x NY	1	3:1	Obs.	144	11	25.6	<0.001				
			Exp.	114	38						
			2	15:1	Exp.			142.5	9.5	0.25	0.62

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 4 Segregation of leaf-sheath color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Green	Purple		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC	1	3:1	Obs.	178	16	
			Exp.	145.5	48.5	29.0 <0.001
	2	15:1	Exp.	181.9	12.1	1.32 0.25
SPR1 x KC	1	3:1	Obs.	117	5	
			Exp.	91.5	30.5	28.1 <0.001
	2	15:1	Exp.	114.4	7.6	0.96 0.32
KDML105 x KC	no segregation observed					
RD6 x KC	no segregation observed					
KDK x KC	1	3:1	Obs.	150	36	
			Exp.	139.5	46.5	3.2 0.07
<i>Cultivated rice x NY wild rice</i>						
CNT1 x NY	1	3:1	Obs.	155	9	
			Exp.	123	41	33.3 <0.001
	2	15:1	Exp.	153.8	10.2	0.16 0.69
SPR1 x NY	1	3:1	Obs.	109	49	
			Exp.	118.5	39.5	3.05 0.08
KDML105 x NY	1	3:1	Obs.	85	51	
			Exp.	102	34	102 <0.001
	2	15:1	Exp.	127.5	8.5	226.67 <0.001
RD6 x NY	1	3:1	Obs.	131	3	
			Exp.	67	33.5	88.90 <0.001
	2	15:1	Exp.	125.6	8.4	3.67 0.06
KDK x NY	1	3:1	Obs.	137	15	
			Exp.	114	38	18.56 <0.001
	2	15:1	Exp.	142.5	9.5	3.39 0.06

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 5 Segregation of auricle color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Purple	Green		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC		no segregation observed				
SPR1 x KC		no segregation observed				
KDML105 x KC		no segregation observed				
RD6 x KC		no segregation observed				
KDK x KC	1	3:1	Obs. 146	40	1.21	0.27
			Exp. 139.5	46.5		
<i>Cultivated rice x NY wild rice</i>						
CNT1 x NY		no segregation observed				
SPR1 x NY		no segregation observed				
KDML105 x NY		no segregation observed				
RD6 x NY		no segregation observed				
KDK x NY	1	3:1	Obs. 29	123	2.84	0.09
			Exp. 38	114		

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 6 Segregation of ligule color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P					
			Purple	Green							
<i>Cultivated x KC wild rice</i>											
CNT1 x KC	no segregation observed										
SPR1 x KC	no segregation observed										
KDML105 x KC	no segregation observed										
RD6 x KC	no segregation observed										
KDK x KC	1	3:1	Obs.	133	53	1.21	0.27				
			Exp.	139.5	46.5						
<i>Cultivated rice x NY wild rice</i>											
CNT1 x NY	1	1:3	Obs.	1	163	52.03	<0.001				
			Exp.	41	123						
			2	1:15	Exp.			10.2	163.8	8.90	<0.001
					3			1:63	Exp.		
SPR1 x NY	1	1:3	Obs.	3	155	44.97	<0.001				
			Exp.	39.5	118.5						
			2	1:15	Exp.			9.9	148.1	5.10	0.02
					3			1:63	Exp.		
KDML105 x NY	1	1:3	Obs.	6	130	30.74	<0.001				
			Exp.	34	102						
			2	1:15	Exp.			8.5	127.5	0.78	0.38
RD6 x NY	1	1:3	Obs.	9	125	23.89	<0.001				
			Exp.	33.5	100.5						
			2	1:15	Exp.			8.4	125.6	0.05	0.82
KDK x NY	1	3:1	Obs.	90	62	20.21	<0.001				
			Exp.	114	38						
			2	15:1	Exp.			142.5	9.5	309.47	<0.001
					2			9:7	Exp.		

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 7 Segregation of apiculus color of F₂ hybrids between cultivated and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Red	Colorless		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC			Obs.	102	5	
	1	3:1	Exp.	76.5	25.5	69.69 <0.001
	2	15:1	Exp.	156.6	10.4	304.23 <0.001
	2	9:7	Exp.	93.9	73.1	1.58 0.20
SPR1 x KC			Obs.	32	90	
	1	1:3	Exp.	30.5	91.5	0.09 0.75
KDML105 x KC			Obs.	1	148	
	1	1:3	Exp.	37.2	11.8	47.03 <0.001
	2	1:15	Exp.	9.3	139.7	7.91 0.004
	3	1:63	Exp.	2.3	146.7	0.77 0.38
RD6 x KC			Obs.	126	29	
	1	3:1	Exp.	116.2	38.8	3.27 0.07
KDK x KC	no segregation observed					
<i>Cultivated x NY wild rice</i>						
CNT1 x NY			Obs.	94	47	
	1	3:1	Exp.	105.8	35.2	2.89 0.08
SPR1 x NY			Obs.	100	35	
	1	3:1	Exp.	101.2	33.8	0.06 0.90
RD6 x NY			Obs.	89	35	
	1	3:1	Exp.	91.5	30.5	0.73 0.79
KDK x NY	no segregation observed					

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 8 Segregation of awn color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Red	White		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC	no segregation observed					
SPR1 x KC	no segregation observed					
KDML105 x KC	no segregation observed					
RD6 x KC	no segregation observed					
KDK x KC		Obs.	158	5		
	1	3:1	Exp. 122.3	40.7	41.81	<0.001
	2	15:1	Exp. 152.8	10.2	2.81	0.09
<i>Cultivated x NY wild rice</i>						
CNT1 x NY		Obs.	8	103		
	1	1:3	Exp. 31.2	93.8	18.21	<0.001
	2	1:15	Exp. 7.8	117.2	1.72	0.19
SPR1 x NY		Obs.	61	46		
	1	3:1	Exp. 80.2	26.8	18.47	<0.001
	2	15:1	Exp. 100.3	6.7	246.5	<0.001
	2	9:7	Exp. 60.2	46.8	0.02	0.88
RD6 x NY		Obs.	53	52		
	1	3:1	Exp. 78.8	26.2	33.67	<0.001
	2	15:1	Exp. 98.4	6.6	335.6	<0.001
	2	9:7	Exp. 59	46	1.39	0.23
KDK x NY	no segregation observed					

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 9 Segregation of stigma color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Red	White		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC			Obs.	105	62	
	1	3:1	Exp.	78.8	26.2	57.34 <0.001
	2	15:1	Exp.	156.6	10.4	271.70 <0.001
	2	9:7	Exp.	93.9	73.1	2.97 0.08
SPR1 x KC			Obs.	32	100	
	1	1:3	Exp.	30.5	91.5	0.86 0.35
KDML105 x KC			Obs.	1	148	
	1	1:3	Exp.	37.2	11.8	47.03 <0.001
	1	1:15	Exp.	9.3	139.7	7.91 0.004
	1	1:63	Exp.	2.3	146.7	0.76 0.38
RD6 x KC			Obs.	143	12	
	1	3:1	Exp.	116.2	38.8	24.62 <0.001
	2	15:1	Exp.	145.3	9.7	0.58 0.44
KDK x KC			Obs.	168	8	
	1	3:1	Exp.	132	44	39.27 <0.001
	2	15:1	Exp.	165	11	0.87 0.35
<i>Cultivated x NY wild rice</i>						
CNT1 x NY			Obs.	99	40	
	1	3:1	Exp.	104.2	34.8	1.05 0.30
SPR1 x NY			Obs.	102	34	
	1	3:1	Exp.	102	34	0 1
RD6 x NY			Obs.	92	34	
	1	3:1	Exp.	94.5	31.5	0.26 0.60
KDK x NY		no segregation observed				

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 10 Segregation of hull color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Straw	Dark brown		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC			Obs.	150	16	
	1	3:1	Exp.	124.5	41.5	20.89 <0.001
	2	15:1	Exp.	155.6	10.4	3.25 0.07
SPR1 x KC			Obs.	130	2	
	1	3:1	Exp.	99	33	38.82 <0.001
	2	15:1	Exp.	123.8	8.2	5.05 0.02
KDML105 x KC			Obs.	77	50	
	1	3:1	Exp.	96.8	32.3	13.80 <0.001
	2	15:1	Exp.	72.6	56.4	1.00 0.32
RD6 x KC			Obs.	177	9	
	1	3:1	Exp.	139.5	46.5	40.32 <0.001
	2	15:1	Exp.	174.4	11.6	0.63 0.42
KDK x KC			Obs.	140	59	
	1	3:1	Exp.	149.2	49.8	2.29 1.13
<i>Cultivated x NY wild rice</i>						
CNT1 x NY			Obs.	80	9	
	1	3:1	Exp.	66.8	22.2	10.52 <0.001
	2	15:1	Exp.	83.4	5.6	2.26 0.13
SPR1 x NY			Obs.	95	64	
	1	3:1	Exp.	119.2	39.8	19.72 <0.001
	2	15:1	Exp.	89.4	69.6	0.79 0.37
RD6 x NY			Obs.	88	10	
	1	3:1	Exp.	73.5	24.5	11.44 <0.001
	2	15:1	Exp.	91.9	6.1	2.61 0.10
KDK x NY			Obs.	63	29	
	1	3:1	Exp.	69	23	2.08 0.14

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 11 Segregation of pericarp color of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P					
			Red	White							
<i>Cultivated x KC wild rice</i>											
CNT1 x KC	1	3:1	Obs.	133	32	2.76	0.09				
			Exp.	123.8	41.2						
SPR1 x KC	1	3:1	Obs.	103	30	0.42	0.51				
			Exp.	99.8	33.2						
KDML105 x KC	1	3:1	Obs.	99	30	0.20	0.64				
			Exp.	96.2	32.2						
RD6 x KC	1	3:1	Obs.	165	17	23.80	<0.001				
			Exp.	136.5	45.5						
			2	15:1	Exp.			170.6	11.4	2.96	0.08
KDK x KC	1	3:1	Obs.	180	2	55.45	<0.001				
			Exp.	136.5	45.5						
			2	15:1	Exp.			170.6	11.4	8.25	0.004
			3	63:1	Exp.			179.2	2.8	0.25	0.61
<i>Cultivated x NY wild rice</i>											
CNT1 x NY	1	3:1	Obs.	79	10	8.99	0.002				
			Exp.	66.8	22.2						
			2	15:1	Exp.			83.4	5.6	3.77	0.52
SPR1 x NY	1	3:1	Obs.	127	32	2.01	0.16				
			Exp.	119.2	39.8						
RD6 x NY	1	3:1	Obs.	74	28	0.32	0.56				
			Exp.	76.5	25.5						
KDK x NY	1	3:1	Obs.	62	29	2.28	0.13				
			Exp.	68.2	22.8						

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 12 Segregation of plant type of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Erect	Intermediate-spreading		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC			Obs.	191	3	
	1	3:1	Exp.	145.5	48.5	56.91 <0.001
	2	15:1	Exp.	181.9	12.1	7.32 0.006
SPR1 x KC	3	63:1	Exp.	191	3	0 1
			Obs.	119	3	
	1	3:1	Exp.	91.5	30.5	33.06 <0.001
KDML105 x KC	2	15:1	Exp.	114.4	7.6	2.99 0.08
			Obs.	172	16	
	1	3:1	Exp.	131.2	43.8	30.25 <0.001
RD6 x KC	2	15:1	Exp.	164	11	2.71 0.09
			Obs.	165	15	
	1	3:1	Exp.	133.8	44.2	25.77 <0.001
KDK x KC	2	15:1	Exp.	166	11	1.49 0.22
			Obs.	169	17	
	1	3:1	Exp.	139.5	46.5	24.05 <0.001
<i>Cultivated x NY wild rice</i>	2	15:1	Exp.	174.4	11.6	2.65 0.10
			Obs.	150	14	
	1	3:1	Exp.	123	41	23.70 <0.001
CNT1 x NY	2	15:1	Exp.	153.8	10.2	1.46 0.22
			Obs.	146	11	
	1	3:1	Exp.	117.8	39.2	27.11 <0.001
SPR1 x NY	2	15:1	Exp.	147.9	9.8	0.15 0.69
			Obs.	95	39	
	1	3:1	Exp.	100.5	33.5	1.20 0.27
RD6 x NY			Obs.	119	33	
	1	3:1	Exp.	114	38	0.87 0.35
KDK x NY			Obs.	119	33	
	1	3:1	Exp.	114	38	0.87 0.35

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 13 Segregation of panicle type of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P	
			Compact	Intermediate-open			
<i>Cultivated x KC wild rice</i>							
CNT1 x KC	1	3:1	Obs.	120	48	1.14	0.28
			Exp.	126	42		
SPR1 x KC	1	3:1	Obs.	104	43	1.41	0.23
			Exp.	110.2	36.8		
KDML105 x KC	1	1:3	Obs.	26	115	3.23	0.07
			Exp.	35.2	135.8		
RD6 x KC	1	1:3	Obs.	29	126	3.27	0.07
			Exp.	38.8	116.2		
KDK x KC	1	1:3	Obs.	53	122	2.59	0.10
			Exp.	44	132		
<i>Cultivated x NY wild rice</i>							
CNT1 x NY	1	1:3	Obs.	27	114	2.57	0.10
			Exp.	35.2	105.8		
SPR1 x NY	1	1:3	Obs.	36	100	0.15	0.69
			Exp.	34	102		
RD6 x NY	1	1:3	Obs.	37	89	1.28	0.25
			Exp.	31.5	94.5		
KDK x NY	1	1:3	Obs.	36	108	0	1
			Exp.	36	108		

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 14 Segregation of spikelet awning of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P	
			Awned	Awnless			
<i>Cultivated x KC wild rice</i>							
CNT1 x KC	1	3:1	Obs.	126	32	3.17	0.07
			Exp.	126	42		
SPR1 x KC	1	3:1	Obs.	110	30	0.95	0.32
			Exp.	105	35		
KDML105 x KC	1	3:1	Obs.	139	10	26.58	<0.001
			Exp.	11.8	37.2		
RD6 x KC	2	15:1	Exp.	139.7	9.3	0.05	0.81
			Obs.	143	11		
KDK x KC	1	3:1	Exp.	116.2	38.8	26.03	<0.001
			Exp.	145.3	9.7		
KDK x KC	1	3:1	Obs.	162	13	28.66	<0.001
			Exp.	132	44		
KDK x KC	1	15:1	Exp.	165	11	0.41	0.51
			Obs.	162	13		
<i>Cultivated x NY wild rice</i>							
CNT1 x NY	1	3:1	Obs.	93	28	3.02	0.08
			Exp.	105.8	35.2		
SPR1 x NY	1	3:1	Obs.	105	30	0.56	0.45
			Exp.	101.3	33.7		
KDML105 x NY	1	3:1	Obs.	125	1	39.37	<0.001
			Exp.	94.5	31.5		
RD6 x NY	2	15:1	Exp.	118.1	7.9	6.40	0.01
			Exp.	124	1.9		
RD6 x NY	3	63:1	Exp.	124	1.9	0.48	0.48
			Obs.	102	25		
KDK x NY	1	3:1	Exp.	94.5	31.5	1.93	0.16
			Obs.	112	32		
KDK x NY	1	3:1	Exp.	108	36	0.59	0.44
			Obs.	112	32		

^a Exp. = Expected ratio; Obs. = Observed ratio

Appendix 15 Segregation of seed shattering of F₂ hybrids between cultivated rice and wild rice (KC and NY).

Cross	No. of gene	Model ^a	Number of plant		χ^2	P
			Shattering	Non-shattering		
<i>Cultivated x KC wild rice</i>						
CNT1 x KC		no segregation observed				
SPR1 x KC		no segregation observed				
KDML105 x KC			Obs.	197	1	
	1	3:1	Exp.	148.5	49.5	63.36 <0.001
	2	15:1	Exp.	185.6	12.4	11.15 <0.001
	3	63:1	Exp.	194.9	3.1	1.43 0.23
RD6 x KC			Obs.	72	1	
	1	3:1	Exp.	54.8	17.2	21.73 <0.001
	2	15:1	Exp.	68.4	4.6	2.96 0.08
	3	63:1	Exp.	71.9	1.1	0.01 0.89
KDK x KC			Obs.	181	1	
	1	3:1	Exp.	136.5	45.5	58.02 <0.001
	2	15:1	Exp.	170.6	10.4	10.09 0.001
	3	63:1	Exp.	179.2	2.8	1.21 0.27
<i>Cultivated x NY wild rice</i>						
CNT1 x NY			Obs.	163	2	
	1	3:1	Exp.	123.8	41.2	49.79 <0.001
	2	15:1	Exp.	154.7	10.4	7.14 0.007
	3	63:1	Exp.	162.4	3.6	0.13 0.72
SPR1 x NY			Obs.	145	1	
	1	3:1	Exp.	109.5	36.5	46.03 <0.001
	2	15:1	Exp.	136.9	9.1	7.71 0.005
	3	63:1	Exp.	143.7	2.3	0.73 0.39
KDML105 x NY		no segregation observed				
RD6 x NY		no segregation observed				
KDK x NY			Obs.	136	1	
	1	3:1	Exp.	102.8	34.2	43.03 <0.001
	2	15:1	Exp.	128.4	8.6	7.12 0.007
	3	63:1	Exp.	134.9	2.1	0.61 0.43

^a Exp. = Expected ratio; Obs. = Observed ratio

Curriculum vitae

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Jamjod. 2004. Gene flow between cultivated rice (*Oryza sativa* L.) and wild rice (*O. rufipogon* Griff.) in farmers' field. 23 – 25 April 2004. RGJ Congress V, Pattaya, Thailand.

Publications and Presentations:

Niruntrayakul S., B. Rerkasem and S. Jamjod. 2007. Crossability between cultivated rice (*Oryza sativa* L.) and common wild rice (*O. rufipogon* Griff.). A paper presented in The 2nd International Conference on Rice for the Future, Bangkok, Thailand, 5-9 November 2007. (Poster presentation)

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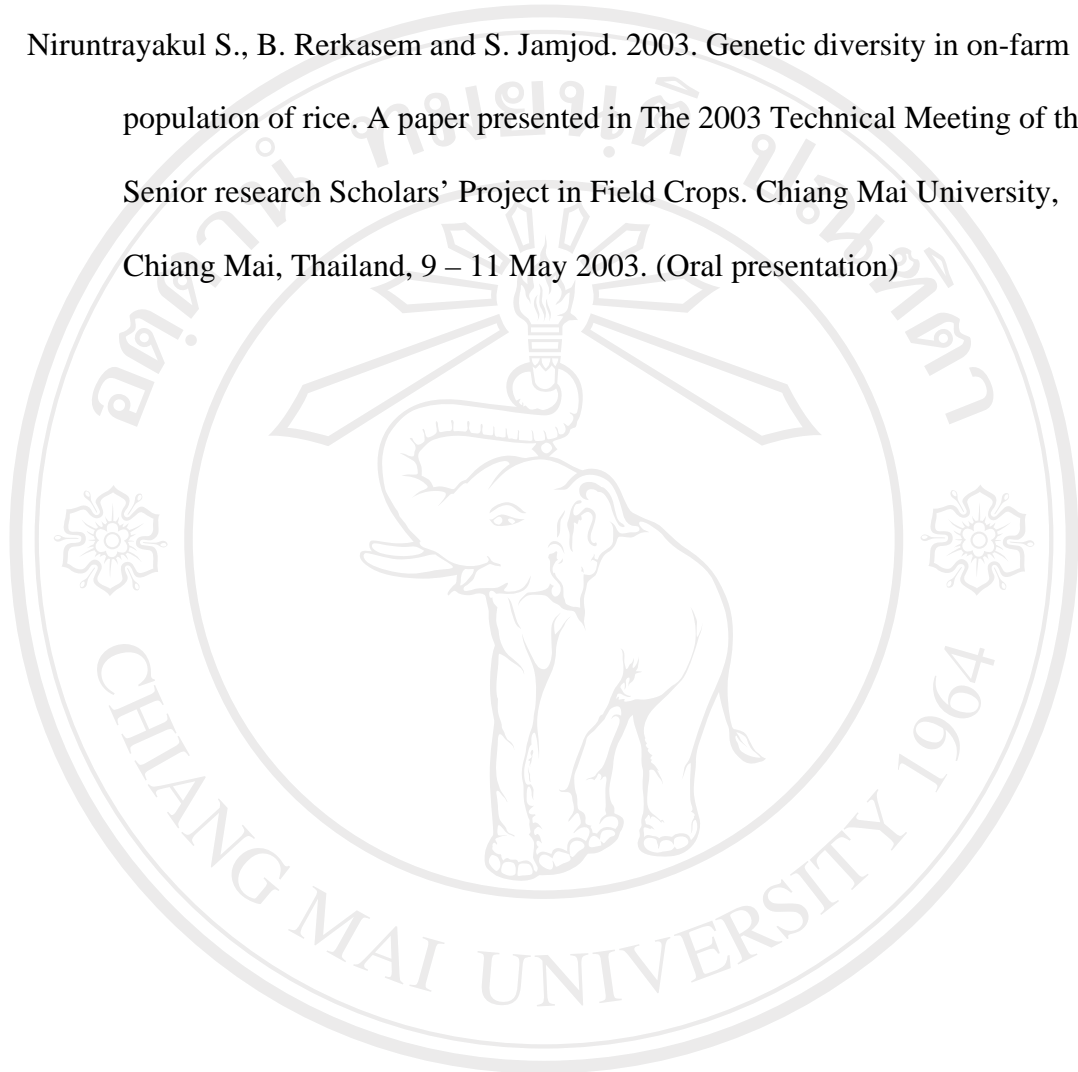
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