

Comparative Mapping of Seed Dormancy Loci between Tropical and Temperate Ecotypes of Weedy Rice (*Oryza sativa* L.)

**Supplemental Material**

**Table S1 List of the rice lines (*O. sativa*) used as the parents for hybridization**

Line	Origin	Ecotype or subspecies	Hull color	Pericarp color	Awn	Seed dormancy
LD (C9587 <sup>*</sup> )	Lianyungang, China 34.59°N 119.22°E <sup>**</sup>	Temperate weedy, <i>japonica</i> -like <sup>*</sup>	Black	Red	Long (>5 cm)	Strong
SS18-2 (SS18 <sup>*</sup> )	Songkla, Thailand 7.18°N 100.59°E <sup>*</sup>	Tropical weedy, <i>indica</i> -like <sup>*</sup>	Black	Red	Long (>5 cm)	Strong
EM93-1	Breeding line	<i>indica</i> , cultivated	Straw	White	None	Weak

Note: EM93-1 was the common parent in crosses with LD or SS18-2. Superscripts indicate the information from Tang and Morishima (1997) (\*) or Jiang *et al.* (1985) (\*\*).

**Table S2 List of correlations between seeds and caryopses for the degree of dormancy in the BC<sub>1</sub>F<sub>1</sub> (EM93-1//EM93-1/LD) population**

Measurement	11-DAR seeds	21-DAR seeds	31-DAR seeds	Caryopses
1-DAR seeds	0.878	0.742	0.546	0.406
11-DAR seeds		0.871	0.652	0.414
21-DAR seeds			0.724	0.454
31-DAR seeds				0.414

Listed are Pearson correlation coefficients (*r*) of percent germination for seeds at 1 to 31 days of after-ripening (DAR) or caryopses at 1 DAR. All the *r* values were significant at the probability level of <0.0001.

**Table S3 Phenotypic variation in seed morphologies and their correlations with seed dormancy in the BC<sub>2</sub>F<sub>1</sub> (9) and BC<sub>2</sub>F<sub>1</sub> (139) populations**

Seed dormancy <sup>a</sup>	Parameter	Morphological traits <sup>b</sup>					
		Awn		Hull color			Pericarp color
		Length (mm)	%	L*	a*	b*	
<u>BC<sub>2</sub>F<sub>1</sub> (9)</u>		(2.7±4.8)	(28±38)	(47±8.8)	(2.7±1.1)	(13.5±6.1)	(0.53±0.50)
7 DAR	<i>r</i>	-0.381	-0.408	0.420	0.528	0.486	-0.450
	<i>Prob.</i>	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
14 DAR	<i>r</i>	-0.426	-0.486	0.471	0.568	0.498	-0.413
	<i>Prob.</i>	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
21 DAR	<i>r</i>	-0.436	-0.496	0.451	0.498	0.468	-0.435
	<i>Prob.</i>	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
<u>BC<sub>2</sub>F<sub>1</sub> (139)</u>		(7.1±8.0)	(50±38)	(45±9.0)	(2.4±1.1)	(13.3±6.0)	(0.63±0.48)
7 DAR	<i>r</i>	-0.181	-0.238	0.075	0.045	0.061	-0.321
	<i>Prob.</i>	0.0332	0.0048	0.3775	0.5998	0.4749	<.0001
14 DAR	<i>r</i>	-0.352	-0.392	0.275	0.241	0.252	-0.353
	<i>Prob.</i>	<.0001	<.0001	0.0010	0.0041	0.0026	<.0001
21 DAR	<i>r</i>	-0.346	-0.383	0.275	0.325	0.294	-0.376
	<i>Prob.</i>	<.0001	<.0001	0.0016	0.0002	0.0007	<.0001

<sup>a</sup> DAR, days of after-ripening prior to germination.

<sup>b</sup> Data in the parentheses are means and standard deviations for the trait measurements described in Materials and Methods. For the awn and pericarp color traits, a negative correlation coefficient (*r*) indicates that the presence of awn or red pigment tended to reduce germination (or enhance seed dormancy). For the hull color, a positive *r* value indicates that a high intensity of darkness (L\*), greenness (a\*) or blueness (b\*) tended to reduce germination.