



Supplementary

Efficiency of short-grain rice breeding program between pedigree and single seed descent methods for yield, biotic resistance and cooking quality derived from indica × japonica

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Supplementary Tables

Table S1 Gene-based/linked markers used for foreground selection for biotic resistance, abiotic tolerance and cooking quality for their validation in breeding lines

Target trait	Gene	Chr.	Marker name	SNP/Indel	Homozygous target SNP/Indel	LGC code
Amylose content	<i>wx^b</i>	6	wx_5UTR_G/T	G/T	T:T	002–0052.1
Gelatinization temperature	<i>SSIIa</i>	6	ALK_ex8_SNP_A/G	A/G	A:A	002–0049.1
Short grain	<i>GS3</i>	3	GS3	C/A	C:C	002–0755.1
Aroma	<i>badh2</i>	8	Aroma_2-3	AAAAGATTATGGC/TATAT	TATAT:TATAT	002–0829.1
Blast resistance	<i>Pi-ta</i>	11	TBGI453598	T/C	T:T	002–0821.1
Brown planthopper	<i>Bph3</i>	4	OsLecRK3_QBPHR	A/G	G:G	002–0263.1
Bacterial leaf blight	<i>Xa21</i>	11	SNP_P100	G/A	G:G	002–0998.1

Chr = Chromosome

Table S2 Thermal cycling conditions for polymerase chain reaction amplification used by Hydrocycler™

Stage	Temperature	Duration	Number of cycles
1	94 °C	15 min	1
2	94 °C	20 s	10
	61 °C (decrease of 0.6 °C per cycle to final temperature of 55 °C)	1 min	
3	94 °C	20 s	26
	55 °C	1 min	

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Supplementary Figure

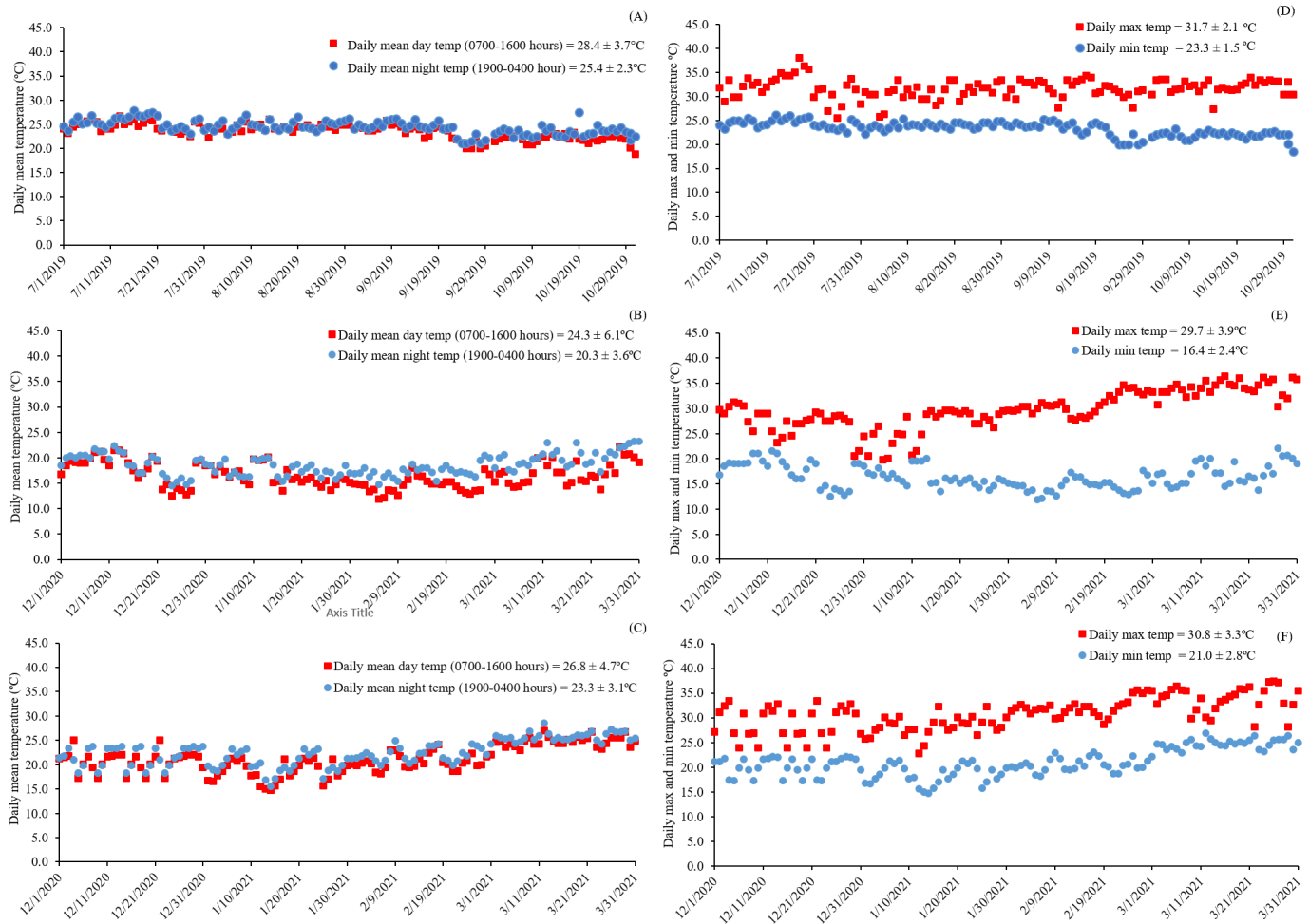


Fig. S1 Mean air temperature in: (A) Chiang Rai, wet season 2019; (B) Chiang Rai, dry season 2020; (C) Nakhon Pathom, dry season 2020; (D) max and min of air temperature in Chiang Rai, wet season 2019; (E) Chiang Rai, dry season 2020; (F) Nakhon Pathom, dry season 2020, where temp = temperature, max = maximum and min = minimum