

**S1 Table. QTLs affecting Grain Number per Panicle (GNP) detected in the reciprocal introgression lines (ILs) in Beijing and Sanya.**

Population	Marker interval <sup>1)</sup>	Environment <sup>2)</sup>	Chr	GNP			
				QTL	LOD	<i>A</i>	PVE(%)
TQ-ILs	<u>RM128</u> -OSR23	SY	1	<i>QGnp1</i>	4.69	-13.9	5.3
	<u>RM227</u> - <u>RM85</u>	<b>BJ</b>	<b>3</b>	<b><i>QGnp3b</i></b>	<b>3.04</b>	<b>-19.5</b>	<b>4.3</b>
		<b>SY</b>			<b>6.54</b>	<b>-19.8</b>	<b>11.3</b>
	<u>RM255</u> -RM348	BJ	4	<i>QGnp4b</i>	6.86	19.3	10.7
		SY			3.39	13.7	4
	RM289- <u>RM163</u>	BJ	5	<i>QGnp5</i>	5.14	16.8	8.5
	RM439- <u>RM141</u>	SY	6	<i>QGnp6b</i>	2.22	28.8	5.6
	<u>RM210</u> -RM556	BJ	8	<i>QGnp8b</i>	4.35	-16.5	6.1
		SY			3.35	-19.4	7.6
	<u>RM147</u> - <u>RM590</u>	SY	10	<i>QGnp10</i>	10.35	-22.3	12.9
LT-ILs	RM112- <u>RM208</u>	SY	2	<i>QGnp2</i>	5.43	-18.5	9.8
	RM81B- <u>RM231</u>	BJ	3	<i>QGnp3a</i>	8.87	-25.3	12.7
	<u>RM227</u> - <u>RM85</u>	<b>BJ</b>	<b>3</b>	<b><i>QGnp3b</i></b>	<b>9.59</b>	<b>-14.6</b>	<b>11.6</b>
		<b>SY</b>			<b>7.36</b>	<b>-21.5</b>	<b>12.5</b>
	<u>RM255</u> -RM348	BJ	4	<i>QGnp4b</i>	14.62	21.3	23
		SY			6.1	26.2	12.2
	RM204- <u>RM225</u>	SY	6	<i>QGnp6a</i>	4.84	-17.2	7.2
	RM439- <u>RM141</u>	SY	6	<i>QGnp6b</i>	5.37	-17.5	8.7
	RM339- <u>RM223</u>	BJ	8	<i>QGnp8a</i>	4.97	14.4	6.4
		SY			2.62	14.6	6.5
<u>RM242</u> - <u>RM278</u>	SY	9	<i>QGnp9</i>	4.11	16.4	6.4	

1) The underlined markers are those closer to the putative QTL.

2) BJ: Beijing, SY: Sanya

3) The QTL additive effect results from substitution of a Teqing (TQ) allele by a Lemont (LT) allele.