

Table S1 Results of polymeric identification of genes from different genetic backgrounds

Parent	Generations	Gene polymerization types	Number of tested plants	Number of polymers	Polymerization rate	
Hengguan35	F ₃	<i>1Dx5+1Dy10, Sec-1^S</i>	96	6	6.3%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	48	1	2.1%	
	F ₄	<i>1Dx5+1Dy10, Sec-1^S</i>	107	34	31.8%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	260	10	3.8%	
	F ₅	<i>1Dx5+1Dy10, Sec-1^S</i>	200	101	50.5%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	120	10	8.3%	
	F ₆	<i>1Dx5+1Dy10, NGLi-D2</i>	107	14	13.08%	
		<i>1Dx5+1Dy10, Sec-1^S</i>	113	75	66.37%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	26	12	46.15%	
		<i>1Dx5+1Dy10, NGLi-D2</i>	80	54	67.50%	
	F ₇	<i>1Dx5+1Dy10, Sec-1^S</i>	139	133	95.68%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	50	11	22%	
	F ₈	<i>1Dx5+1Dy10, NGLi-D2</i>	140	127	90.7%	
		<i>1Dx5+1Dy10, Sec-1^S</i>	136	131	96.3%	
	Zhengmai 7698	F ₃	<i>1Dx5+1Dy10, Sec-1^S</i>	86	10	11.6%
			<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	35	1	2.8%
F ₄		<i>1Dx5+1Dy10, Sec-1^S</i>	553	145	26.2%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	500	21	4.2%	
F ₅		<i>1Dx5+1Dy10, Sec-1^S</i>	240	111	46.3%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	150	15	10%	
F ₆		<i>1Dx5+1Dy10, Sec-1^S</i>	107	32	29.91%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	134	50	37.31%	
F ₇		<i>1Dx5+1Dy10, Sec-1^S</i>	366	260	71.04%	
		<i>1Dx5+1Dy10, NGLi-D2, Sec-1^S</i>	89	84	94.38%	
F ₈		<i>1Dx5+1Dy10, Sec-1^S</i>	176	163	92.6%	

		$1Dx5+1Dy10$, <i>NGli-</i> <i>D2</i> , <i>Sec-1^s</i>	208	175	84.1%
Zhengmai 366	F ₃		129	16	12.4%
	F ₄		463	56	12%
	F ₅	$1Dx5+1Dy10$, <i>NGli-</i>	450	55	12.2%
	F ₆	<i>D2</i>	565	66	11.68%
	F ₇		161	155	96.27%
	F ₈		216	179	82.9%