

**Table S1** The primers used in this study

Primer name	Primer sequence (5' to 3')	Purpose
BJFg++	ggcaCGTTGCTGGCGATCGA	Primers for CRISPR/Cas9 vector construction
BJFg--	aaacTCGATCGCCAGCAACG	
BJGg++	ggcaCAACGTCGAGACCGGC	Primers for CRISPR/Cas9 vector construction
BJGg--	aaacGCCGGTCTCGACGTTG	
BjfF	CTCCATCCACAAACCCTCCT	Primers for detection of BJF target site in CY84
BjfR	TTCCTGATCTTCCCCTGCAG	
BjgF	CGCCAACAACCCGGTAACTA	Primers for detection of BJG target site in CY84
BjgR	CCCCATGTCCGCTAGAAAGG	
Hi-BJFf	ggagtgagtacggtgtgcTGCAGCACGAGGGCGATG	Detection of BJF target site in hybrid seeds
Hi-BJFr	gagttgtagtctggatggGGGATGAGGCCCTGATG	
Hi-BJGf	ggagtgagtacggtgtgcCAGGGACAACATGCGGGC	Detection of BJG target site in hybrid seeds
Hi-BJGr	gagttgtagtctggatggGGGCACCTCGACGTACCT	
Csa9F	CCTAAGAAGAAGAGAAAGGTCTG	Primers for detection of <i>Cas9</i> element
Cas9R	GCAGATGATAGATTGTGGGGTA	
HygF	CTTTGCCCTCGGACGAGTGCTG	Primers for detection of <i>hygromycin</i> element
HygR	GTATATGCTCCGCATTGGTCTT	