

Table S8. The identified SNP after alignment of *PERK-1*

Genotypes	Sequence
W-82	GGCAACTCCGTCGTCTCCTCCGCCG GCG ACACCTTCCTCGCCACCT
LEE	GGCAACTCCGTCGTCTCCTCCGCCG GTG ACACCTTCCTCGCCACCT
Zhong	GGCAACTCCGTCGTCTCCTCCGCCG GTG ACACCTTCCTCGCCACCT

Table S9. KASP marker sequence developed for screening of *GmPERK-1* in soybean

Gene	Marker	Probe	Sequence (5 prime to 3 prime)	Targeted allele to call
<i>GmPERK-1</i>	<i>PERK-1_SNP</i>	FAM	GAAGGTGACCAAGTTCATGCTGGAGG TGGCGAGGATGTCA	FAM – attached for allele T
		HEX	GAAGGTCGGAGTCAACGGATTGGAGG TGGCGAGGATGTCTG	HEX attached for allele C
		Common	GCCGGCAACTCCGTCGTCTCC	

Table S10. Recipe of *GmPERK-1* KASP assay for 1x

Ingredients	Volume
KASP Master-Mix	2.5 µl
MgCl ₂	0.04 µl
ddH ₂ O	0.305 µl
Primer Mix	0.06 µl
DNA	2 µl