

Supplementary Table S6: Associative analysis of SNPs markers for phenotyping (visual score) of Brazilian soybean genotypes under flooding conditions, in experiment 3.

Experiment 3									
Molecular Marker	N <sup>(1)</sup>	1 <sup>st</sup> Phenotyping		2 <sup>nd</sup> Phenotyping		3 <sup>rd</sup> Phenotyping		4 <sup>a</sup> Phenotyping	
		M <sup>(2)</sup>	<i>p-value</i>	M <sup>(3)</sup>	<i>p-value</i>	M <sup>(4)</sup>	<i>p-value</i>	M <sup>(5)</sup>	<i>p-value</i>
GSM0599									
CC	24	6.09	0.07	5.84	0.03	5.95	0.2	5.77	0.21
GG	2	5.5		5.06		5.56		5.32	
GSM0600									
AA	25	6.04	nd	6	nd	5.9	nd	5.7	nd
CC	1	6.38		6.5		6.5		6.63	
GSM0601									
TT	20	6.09	0.13	5.8	0.12	5.59	0.31	5.72	0.39
AA	4	5.75		5.44		5.75		5.84	
GSM0602									
TT	14	6.13	0.21	5.8	0.48	5.93	0.46	5.66	0.27
AA	10	5.94		5.79		5.96		5.86	
GSM0603									
TT	13	5.96	0.11	5.69	0.18	5.82	0.18	5.6	0.15
GG	10	6.25		5.91		6.05		5.95	
GSM0604									
TT	18	6.02	0.47	5.73	0.43	5.85	0.43	5.7	0.45
AA	5	6		5.78		5.9		5.65	
GSM0605									
TT	10	6.25	0.11	5.89	0.23	6.09	0.12	5.85	0.30
GG	13	5.96		5.71		5.79		5.67	
GSM0611									
TT	18	6.03	0.49	5.71	0.32	5.81	0.12	5.56	0.02
CC	6	6.04		5.83		6.15		6.29	

GSM0612									
TT	9	5.93	0.16	5.54	0.03	5.63	0.02	5.4	0.04
CC	15	6.17		5.98		6.16		5.99	
GSM0613									
GG	9	5.93	0.22	5.54	0.04	5.38	0	5.4	0.05
AA	15	6.12		5.95		6.13		5.95	
GSM0614									
CC	9	5.88	0.14	5.88	0.32	5.89	0.47	5.53	0.20
AA	16	6.13		5.79		5.91		5.8	
GSM0615									
GG	14	6.13	0.32	5.84	0.41	5.96	0.48	5.78	0.47
AA	10	6.01		5.79		5.95		5.75	
GSM0616									
TT	19	6.05	0.45	5.69	0.17	5.8	0.09	5.56	0.03
CC	6	6.08		5.94		6.17		6.23	
GSM0617									
TT	9	5.97	0.29	5.68	0.28	5.86	0.39	5.61	0.30
AA	15	6.11		5.82		5.93		5.79	
GSM0618									
TT	9	5.97	0.44	5.68	0.43	5.86	0.47	5.61	0.33
CC	14	5.94		5.72		5.88		5.76	
GSM0619									
TT	24	6.07	0.22	5.81	0.14	5.93	0.45	5.73	0.40
GG	2	5.75		5.38		5.88		5.88	
GSM0620									
GG	25	6.06	nd	5.83	nd	5.99	nd	5.83	nd
AA	1	5.63		4.88		5.5		5.5	
GSM0621									
AA	24	6.05	nd	5.81	nd	5.95	nd	5.77	nd
TT	1	5.63		4.88		5.5		5.5	
GSM0622									

GG	12	5.82	0.02	5.7	0.25	5.93	0.49	5.82	0.32
AA	14	6.24		5.85		5.92		5.69	
GSM0623									
TT	11	6.15	0.24	5.77	0.48	5.88	0.41	5.79	0.37
AA	13	5.98		5.76		5.93		5.68	
GSM0625									
GG	11	6.15	0.22	5.72	0.26	5.78	0.09	6.07	0.03
AA	15	5.98		5.86		6.11		5.49	
GSM0626									
GG	10	5.99	0.46	5.75	0.36	5.84	0.43	5.73	0.42
AA	13	6.01		5.68		5.88		5.66	

<sup>(1)</sup> Number of genotypes classified in each group and (2) (3) (4) (5) Average of visual damage scales performed 3, 15, 29, 43 and 60 days after drainage, respectively from experiment 3 in the 2018 season /19; nd: data not available. Values in bold differ by the 5% t-test for phenotyping after flooding.