

**Table S1 List of primers**

Name	Comment or enzyme or amplicon size [nt]	Forward primer (5'-3')	Reverse primer (5'-3')
INDEL_271_272 <sup>a</sup>	size polymorphism	CAAGGCTCTGCAGTACTTGACAGAG	GACTTCATCAAGCGTAAGCACATGTC
CAPS_321_322 <sup>a</sup>	<i>Hpy188I</i>	TTGCCGCTTAAGAATAAGCATCCTC	GTTCCATCATAGGGGAAGTTTGTG
CAPS_325_326 <sup>a</sup>	<i>Hpy188I</i>	TTTCATTGTGCACCACCAACC	CAGCCGTGGTCTTCTTCT
CAPS_331_332 <sup>a</sup>	<i>BamHI</i>	GCTACTCTGACTCCGCAAGG	AGCCCGACCTCCTCACCA
PAV_261_262 <sup>a</sup>	presence/absence	CTCTACGTCAAGCGGATGCAG	GTGGTAGTGCGGGTAGGAGGAG
PAV_295_296 <sup>a</sup>	presence/absence	CATACTGGTCTGTAGCAAGCAAGCA	AGCACGGCTCAGATAAAGGAGTTG
CAPS_341_342 <sup>a</sup>	<i>EcoNI</i>	CGAGAGCATGTCCGACTTC	ATATCCCAGTGTGTGATGC
CAPS_zt3_4 <sup>a</sup>	<i>BstUI</i>	GAGGCATGGAGGAACCTATGGAC	AACTGAAGATGGGCTTGTGCAA
CAPS_335_336 <sup>a</sup>	<i>MspI</i>	CAGTGATGCAGGCGTGGAG	ATGGCCATGTCGATGTACGG
CAPS_311_312 <sup>a</sup>	<i>MvaI</i>	TCGTAATAAGATGTGCGGAGAGATG	CAATGAACCAACTGTTGCATTTTCA
TP_13_14 <sup>a</sup>	external primers	CAAGCCTGACCCAGTACTCAGG	CACAGCCTCCTCCACAGTTC
TP_13_14 <sup>a</sup>	internal primers	ATGCGACTTCGGTTGATGCTC	ATTCACCACATTAGCAACGCA
AS_PCR_17_18 <sup>a</sup>	additional mismatch	ACATCTGAAGAGCCAAGTTGATCC	GCTATCACATACCGCAAGAGAATCTC
INDEL_201_202 <sup>a</sup>	size polymorphism	GACAAATGTAGTGTTCATGGGGATG	TTCCAGAGGATATGCCTTTGCACTTGG
PAV_365_366 <sup>a</sup>	presence/absence	TCCAGATGGGAATGTGTCGTCT	GCCATAGCTTTGTTGTGGATGC
CAPS_359_360 <sup>a</sup>	<i>NotI</i>	AGTTTGAAGAAAAACAGCACAGG	AGAAACAGGCCCGAAAACAAGTC
<i>TmCCA1, HvCCA1, TtCCA1</i> <sup>b</sup>	150	CAAGGTCTTCTCCCTCTTTTGTCTC	GTTGACCTTGCTCCTGAGCTACTTG
<i>TmLUX, TtLUX-A+B</i> <sup>b</sup>	137	ACAAGCGGTTCTGTTGGAGGTG	GACGTAGAGGCGGTACTTCTGGAG

Name	Comment or enzyme or amplicon size [nt]	Forward primer (5'-3')	Reverse primer (5'-3')
<i>TmUBC, HvUBC, TtUBC</i> <sup>b</sup>	151	AAGCAGCCAGAATGTACAGCGAGAAC	GGTACAGACCAGCAAAGCCAGAAATG
<i>HvLUX</i> <sup>b</sup>	136	GGTGACCGAGTGGGAGACG	GCGGTGCACGTCCAGAAG
<i>TmGI, HvGI, TtGI</i> <sup>b</sup>	135	TCCATGACAAAGTAGGTGGCTGA	CATGGTCCTGATGTTGAGTGGAG
<i>TmPRR95, HvPRR95, TtPRR95</i> <sup>b</sup>	106	GTCTGGGTTCTCTACTCTCCAC	GCATTTGAAAACCATGCTAACTGC
<i>TmPpd1</i> <sup>b</sup>	129	AATGGTGCTGCTGACTTCTTGG	CTTCTGCGTCTGAATGGCACTT
<i>TmFT</i> <sup>b</sup>	153	GCAGGAGGTGATGTGCTACGAG	AGGTTGTAGAGCTCGGCGAAGT
<i>TmPRR73</i> <sup>b</sup>	169	AAGGGTCTTGCTGGTGGAGAAC	AGGCATGGCGACCTCAGTTAAT
<i>TmPRR59</i> <sup>b</sup>	145	AAGAAAATCAGCGTTGCATCA	GTTTCACCGCTCACAGTCCATC
<i>TmTOC1</i> <sup>b</sup>	111	AGGAGACGGATGCTTGGTTTG	GTCCGAAAGGAGTGTGGTGCT
<i>TmElf3</i> <sup>b</sup>	100	GAGTGGGCCTACGGTGCCAA	AGAGTCCCTTGATCTCGTGCCG
<i>TtLUX-A</i> <sup>b</sup>	199	GAGTTAGCCCGGCAGGTAACAAC	CCCTCCCCGAAGTCAAAC
<i>TtLUX-B</i> <sup>b</sup>	131	GATTGGTGTGCGAGGTTCCG	CGTCTCCCACTCCGTACC
<i>TmPUMILIO</i> <sup>b</sup>	174	AGCGACTTCTCCACTCCTCAG	AATATTTAACCACACGCCGAAC
<i>TILLINGHvLUX</i> <sup>c</sup>	1177	GGTGACCGAGTGGGAGACG	ATCCTAATCCCTTGTGGGCTTC
<i>TILLINGHvPUM</i> <sup>c</sup>	1593	CAGGCAATCAAAACAATGAGTCG	CGTACATTTGAAGGCTGAGTGCTAA
<i>TILLINGHvPUM</i> <sup>c</sup>	-	ACCCACTCTATGCTCAATTTCTTCG	GCTTCTGTGACTGAACCAATGGA
<i>LUX-A</i> <sup>d</sup>	Variable	GAGTTAGCCCGGCAGGTAACAAC	ACAGAGCACACACTCTGCAACTCTC
<i>LUX-B</i> <sup>d</sup>	Variable	TCCAATCCGTCCAATCCAATC	TTGACTGATCGACACAAACACAC
<i>LUX-D</i> <sup>d</sup>	Variable	GGAGGCAGGGGAGGATATGG	TTGACTGATCGAGACACACACAG

<sup>a</sup> Markers mapped in F2/F3 population. Order presented reflects the real genetic order of mapped loci. Markers PAV\_365\_366 and CAPS\_359\_360 could not be genetically linked to the locus

<sup>b</sup> Primer sequences used for RT-qPCR experiments

<sup>c</sup> Primer sequences used for TILLING

<sup>d</sup> Primer sequences used for allele mining in 96-wheat collection