

Supporting Information Table S7 Measurement of kernel traits of wild type and *mn2-m1* mutant

Traits	B73× <i>mn2-m1</i>		Chang7-2× <i>mn2-m1</i>		Z58× <i>mn2-m1</i>		Q319× <i>mn2-m1</i>	
	Wild Type	<i>mn2-m1</i>	Wild Type	<i>mn2-m1</i>	Wild Type	<i>mn2-m1</i>	Wild Type	<i>mn2-m1</i>
Grain length (mm)	11.7±0.19	8.85±0.11**	11.33±0.06	10.95±0.25	12.06±0.1	11.35±0.17**	11.64±0.07	10.09±0.01**
Grain width (mm)	8.69±0.24	6.52±0.17**	9.29±0.15	7.82±0.1**	10.36±0.11	8.98±0.14**	9.76±0.19	8.14±0.05**
Grain thickness (mm)	4.45±0.12	2.37±0.07**	4.36±0.12	3.23±0.02**	5.46±0.25	3.39±0.08**	5.01±0.06	3.44±0.19**
Grain weight (g)	28.32±0.34	7.61±0.16**	32.18±0.05	20.83±0.31**	45.65±0.52	22.38±2.26**	41.35±0.31	21.1±0.49**

\*\* indicates significant level at  $P \leq 0.01$  (Student's t-test). For grain weight, each of 300 normal and *mn2-m1* kernels from F<sub>2</sub> ears of B73 (A), Chang7-2 (B), Z58 (C) and Q319 (D) genetic backgrounds were measured, respectively, with three repeats, each repeat with 100 kernels. For grain length, width and thickness, each of 90 normal and *mn2-m1* kernels randomly selected from the corresponding 300 kernels used for measurement of grain weight were measured, respectively, with three repeats, each repeat with 30 kernels.