

Table S4 Comparison of QTLs identified in this study with those reported by the previous studies

QTLs identified in the present study				QTL ^c
No	Environment	Chr ^a	IR ^b (Mb)	
1	E1	1A	510.39-510.81	
2	E1	1A	4.23-6.64	
3	E1	1A	498.18-499.02	QTLs reported by Li <i>et al.</i> (2019) and Ding <i>et al.</i> (2011)
4	E1	1A	7.67-9.20	
5	E2	1A	7.67-9.20	
6	E3	1A	7.67-9.20	
7	E2	1B	629.15-637.82	
8	E1	1D	5.42-8.71	QTL reported by Li <i>et al.</i> (2007)
9	E1	1D	309.26-316.57	
10	E1	1D	5.42-8.71	
11	E1	1D	413.70-415.53	
12	E1	1D	3.75-6.59	
13	E2	1D	5.42-6.59	
14	E3	1D	5.42-8.71	
15	E3	1D	458.94-459.89	
16	E1	2A	7.83-10.98	
17	E1	2B	683.28-690.67	
18	E1	2B	8.76-10.87	QTLs reported by Lin <i>et al.</i> (2008) and Deng <i>et al.</i> (2017)
19	E2	2B	693.07-695.74	
20	E1	2D	552.19-584.80	QTL reported by Gerard <i>et al.</i> (2019)
21	E2	2D	633.29-638.90	QTL reported by Li <i>et al.</i> (2019)
22	E1	3A	0.22-6.71	
23	E1	3A	13.39-15.33	
24	E3	3A	23.37-23.83	
25	E3	3A	22.53-22.55	
26	E2	3B	47.61-50.35	
27	E1	3D	529.06-612.67	
28	E1	3D	529.06-612.67	
29	E1	3D	2.14-16.14	
30	E2	3D	65.76-67.46	
31	E3	3D	134.43-246.41	QTL reported by Chen <i>et al.</i> (2017)
32	E1	4A	673.49-681.18	QTLs reported by Cui <i>et al.</i> (2017) and Guan <i>et al.</i> (2018)
33	E3	4A	673.49-681.18	
34	E3	4A	714.94-724.32	
35	E3	4B	68.89-69.37	
36	E1	4B	28.94-31.89	
37	E2	4D	428.58-461.26	
38	E1	5A	489.02-494.55	
39	E1	5A	1.91-561.14	QTLs reported by Muhammad <i>et al.</i> (2000) and Guo <i>et al.</i> (2008)

41	E1	5A	18.75-18.76	
42	E1	5A	1.91-561.14	
43	E2	5A	561.14-706.48	QTL reported by Li <i>et al.</i> (2015)
44	E3	5A	671.35-678.80	
45	E3	5A	537.58-546.52	
46	E3	5A	561.14-706.48	QTL reported by Onyemaobi <i>et al.</i> (2018)
47	E1	5D	560.49	
48	E1	5D	7.42-11.85	
49	E1	5D	26.93-37.85	
50	E1	5D	24.33-27.01	
51	E2	5D	26.93-37.85	
52	E3	5D	559.89-565.72	
53	E3	5D	15.06-26.94	
54	E1	6B	3.83-4.57	QTL reported by Muhammad <i>et al.</i> (2020)
55	E1	6B	12.36-13.82	
56	E3	6D	472.52-472.91	
57	E1	6D	78.86-86.76	
58	E3	7A	552.68-572.18	
59	E1	7B	58.73-59.74	QTL reported by Liu <i>et al.</i> (2014)
60	E1	7B	608.41-645.39	QTL reported by Liu <i>et al.</i> (2014)
61	E2	7B	71.15-72.51	QTL reported by Liu <i>et al.</i> (2014)
62	E1	7Da	28.83-37.65	
63	E1	7Da	65.50-66.54	
64	E1	7Da	5.30-631.34	QTL reported by Lin <i>et al.</i> (2008)
65	E1	7Da	28.83-37.65	
66	E1	7Da	65.50-66.54	
67	E1	7Da	5.30-631.34	QTL reported by Lin <i>et al.</i> (2008)
68	E1	7Da	65.50-77.92	
69	E2	7Da	65.50-77.92	
70	E2	7Da	189.91-513.99	
71	E3	7Da	28.83-37.65	
72	E3	7Da	65.50-77.92	
73	E3	7Da	5.30-631.34	
74	E3	7Da	189.91-513.99	
75	E3	7Db	51.95-55.43	

Note: No refer to the number of QTL. E1, E2, E3 refer to Pingdingshan, Yangling, Xianyang environments, respectively. ^a Chromosome that GNS QTLs were detected. ^b The mapping interval range of GNS QTLs. ^c QTLs reported by the previous studies.