

**Appendix B** Principle component (PC) analysis of lodging related traits based on the mean values over three years

Parameter	PC1	PC2	PC3	PC4	PC5	PC6
Eignvalue	3.58	1.31	0.72	0.20	0.13	0.06
Variance %	59.67	21.87	12.06	3.28	2.15	0.96
Cumulative %	59.67	81.55	93.61	96.89	99.04	100.00
PH	0.50	0.06	0.21	0.32	-0.24	-0.74
HCG	0.50	0.04	0.18	0.20	-0.51	0.65
LFI	0.26	0.50	-0.75	0.27	0.20	0.05
LSI	0.47	0.20	0.02	-0.85	0.10	-0.05
SS	-0.13	0.72	0.58	0.14	0.32	0.10
LI	0.43	-0.43	0.15	0.22	0.73	0.16

PH: plant height; HCG: height at center of gravity; LFI: length of basal first internode; LSI: length of basal second internode; SS: stem strength; LI: lodging index