

S3 Table. Phenotypic correlation coefficients (Pearson coefficient) among the traits in BR CSSL population (n=74) and RIL populations. The top right half of the table represents values calculated for the CR-RIL (normal font) and BRRIL (bold font) populations. Correlation coefficients calculated for the CSSL population is given in the bottom half. *, **, *** indicates significance at P <0.001, P <0.01, and P <0.05, respectively. NA: data not available.

| Trait | PH | PL | FLL | FLW | SH or BTS ^a | GermARS | GL | GW | TGW |
|--------------|----------|-----------------------------|----------------|--------------|---------------------------|-------------------------|---------------------------|--------------------------|-----------------------------|
| PH | | 0.753*** 0.583*** | 0.679*** NA | -0.045 NA | -0.251** -0.102 | 0.037 -0.038 | 0.073 -0.074 | 0.019 -0.112 | 0.107 -0.028 |
| PL | 0.540*** | | 0.723*** NA | 0.149 NA | -0.176 -0.026 | -0.022 -0.081 | 0.158 0.067 | -0.055 -0.166* | -0.108 -0.025 |
| FLL | 0.592*** | 0.507*** | | 0.061 NA | -0.217* NA | -0.024 NA | 0.153* NA | 0.019 NA | 0.175* NA |
| FLW | 0.228 | 0.031 | 0.452*** | | -0.012 NA | -0.249** NA | 0.022 NA | 0.087 NA | 0.164* NA |
| SH or BTS | -0.033 | -0.009 | 0.143 | 0.002 | | -0.018 0.072 | -0.224** -0.154 | -0.090 0.042 | -0.232** -0.022 |
| GermARS | 0.144 | -0.104 | 0.149 | 0.110 | 0.157 | | 0.148* -0.043 | -0.145 0.001 | 0.093 -0.012 |
| GL | 0.022 | 0.226 | 0.329** | 0.101 | 0.183 | -0.004 | | -0.132 0.071 | 0.555*** 0.457*** |
| GW | -0.117 | 0.128 | 0.151 | -0.081 | -0.007 | 0.150 | 0.569*** | | 0.401*** 0.537*** |
| TGW | -0.149 | -0.003 | 0.144 | -0.022 | 0.145 | -0.011 | 0.736*** | 0.679*** | |

PH, plant height; PL, panicle length; FLL, flag leaf length; FLW, flag leaf width; SH, seed shattering; BTS, breaking tensile strength; germARS, arcsine transformed value of germination%; GL, grain length; GW, grain width; TGW, thousand grain width.

^a Seed shattering scores were used in RIL populations but BTS values were used in CSSL population.