**Table S7:**

**Coefficients of correlation among different parameters from 31 genotypes of the cultivar collection in two years of production.**

Water soaking (WS) was indexed after 4 h of incubation in deionized water using a 5-point rating scale: score 0, no WS; score 1, <10% of the surface area water-soaked; score 2, 10–35%; score 3, 35–60%; score 4, >60%.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Year | WS at 4 h | Time lag | Water uptake characteristics |
| (rating) | (h) | Flow (mg h-1) | Flux density(kg m-2s-1) | Water permeance(x10-6 m s-1) | Log permeance |
| Osmotic potential (MPa) | 2022 | -0.03ns | 0.17 ns | -0.14 ns | -0.19 ns | 0.14 ns | 0.14 ns |
| 2023 | -0.28 ns | 0.35 ns | -0.50\*\* | -0.51\*\* | -0.24 ns | -0.19 ns |
| WS(rating) | 2022 |  | -0.75\*\*\* | 0.57\*\*\* | 0.74\*\*\* | 0.72\*\*\* | 0.74\*\*\* |
| 2023 |  | -0.71\*\*\* | 0.64\*\*\* | 0.77\*\*\* | 0.78\*\*\* | 0.75\*\*\* |
| Time lag (h) | 2022 |  |  | -0.43\* | -0.41\* | -0.35ns | -0.43\* |
| 2023 |  |  | -0.60\*\*\* | -0.65\*\*\* | -0.61\*\*\* | -0.59\*\*\* |
| Flow rate(mg h-1) | 2022 |  |  |  | 0.85\*\*\* | 0.82\*\*\* | 0.81\*\*\* |
| 2023 |  |  |  | 0.94\*\*\* | 0.89\*\*\* | 0.84\*\*\* |
| Flux density(kg m-2s-1) | 2022 |  |  |  |  | 0.94\*\* | 0.92\*\* |
| 2023 |  |  |  |  | 0.95\*\*\* | 0.90\*\*\* |
| Permeance(x10-6m s-1) | 2022 |  |  |  |  |  | 0.97\*\*\* |
| 2023 |  |  |  |  |  | 0.96\*\*\* |

Significance of levels at P=0.001, 0.01, and 0.05 indicated by \*\*\*, \*\* and \*. ns non-significant.