**S2 Table. Diallel analysis of maize hybrids evaluated under N stress.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Effects** | **PH** | **SDM** | **RDM** | **LRL** | **ARL** | **RV** | **RAD** | **SRL** | **SRSA** | **RSR** |
| ***Fixed*** |  |  |  |  |  |  |  |  |  |  |
| Year (Y) | 1,102.0\*\* | 363.0\*\* | 12.8\*\* | 31.9\*\* | 0.9 | 5.2\* | 74.0\*\* | 2.4 | 43.3\*\* | 436.1\*\* |
| Block/Year | 32.0\*\* | 4.4 | 11.9\* | 16.6\*\* | 8.6 | 38.2\*\* | 140.0\*\* | 73.3\*\* | 54.8\*\* | 6.6 |
| Countertop/Block | 241.00\*\* | 86.0\*\* | 75.0\*\* | 92.6\*\* | 104.6\*\* | 92.1\*\* | 9.0\* | 12.5 | 14.3\* | 24.9\*\* |
| ***Random*** |  |  |  |  |  |  |  |  |  |  |
| GCA | 4.3 x 10-2 | -4.0 x 10-7 | 3.3 | 7.2\*\* | 13.5\*\* | 11.0\*\* | 8.7\*\* | 3.1 | 2.8 | 0.5 |
| GCA x Y | -6.7 x 10-7 | 6.0 x 10-2 | -2.4 x 10-6 | -1.3 x 10-5 | -7.7 x 10-6 | -1.8 x 10-6 | 0.3 | 2.5 | 4.5\* | 22.9\*\* |
| SCA | 0.4 | 8.3 x 10-7 | 0.5 | -1.5 x 10-5 | 4.0 x 10-2 | 0.5 | 1.2 | 3.10.8 | 3.5 | 0.4 |
| SCA x Y | -1.9x10-6 | 0.8 | -7.8x10-7 | 2.2 x 10-5 | -1.3 x 10-6 | -2.3x10-7 | -7.0 x 10-6 | -1.6 x 10-5 | -1.1 x 10-6 | -9.7 x 10-7 |

PH: plant height, SDM: shot dry mass, RDM: root dry mass, LRL: lateral root length, ARL: axial root length, RV: root volume, RAD: root average diameter, SRL: specific root length, SRSA: specific root surface area, and RSR: root shoot ratio. Significant at 5% (\*) or 1% (\*\*) level.