**Supplementary Table 2:** Correlation analysis between the canopy architectural, photosynthetic, and yield components of the canopy of ten maize germplasm grown under optimal field conditions

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | Below PAR | Amount of PAR attenuation | LAI | QyLight | QyDark | Chlorophyll content | 100 Kernel’s weight | AGDM | Cob weight per plant | Number of Kernels per Cob | ***AN*** | ***E*** | ***Ci*** | ***gs*** |
| Below PAR | 1 |   |   |   |   |   |   |   |   |   |  |  |  |  |
| Amount of PAR attenuation | -0.151 | 1 |   |   |   |   |   |   |   |   |  |  |  |  |
| LAI | -0.028 | 0.003 | 1 |   |   |   |   |   |   |   |  |  |  |  |
| QyLight | 0.209 | 0.205 | -0.191 | 1 |   |   |   |   |   |   |  |  |  |  |
| QyDark | 0.016 | 0.092 | -0.083 | 0.065 | 1 |   |   |   |   |   |  |  |  |  |
| Chlorophyll content | 0.143 | 0.026 | 0.037 | 0.013 | 0.003 | 1 |   |   |   |   |  |  |  |  |
| 100 Kernel’s weight | -0.392\*\* | 0.341\*\* | 0.102 | .262\* | 0.037 | 0.041 | 1 |   |   |   |  |  |  |  |
| AGDM | -0.378\*\* | 0.286\*\* | 0.083 | 0.278\* | 0.098 | 0.131 | 0.973\*\* | 1 |   |   |  |  |  |  |
| Cob weight per plant | 0.167 | 0.110 | 0.049 | 0.295 | 0.296 | -0.127 | 0.841\*\* | 0.846\*\* | 1 |   |  |  |  |  |
| Number of Kernels per Cob | -0.369\*\* | 0.257\* | 0.122 | 0.289\*\* | 0.142 | 0.056 | 0.995\*\* | 0.967\*\* | .816\*\* | 1 |  |  |  |  |
| ***AN*** | -0.276*\*\** | 0.211\* | 0.77 | 0.263\* | 0.179 | 0.021 | 0.385\*\* | 0.595\*\* | 0.651\*\* | 0.581\*\* | 1 |  |  |  |
| ***E*** | -0.283\*\* | 0.202 | 0.089 | 0.294\*\* | 0.141 | 0.127 | 0.670\*\* | 0.677\*\* | 0.509\*\* | 0.573\*\* | 0.901\*\* | 1 |  |  |
| ***Ci*** | 0.102 | 0.034 | -0.025 | 0.124 | 0.047 | 0.136 | 0.281\*\* | 0.291\*\* | -0.070 | 0.315\*\* | 0.492\*\* | 0.554\*\* | 1 |  |
| ***gs*** | 0.293\*\* | -0.218\* | -0.065 | 0.244\* | 0.067 | 0.126 | 0.471\*\* | 0.327\*\* | 0.529\*\* | 0.487\*\* | 0.898\*\* | 0.949\*\* | 0.660\*\* | 1 |
| The superscript \*,\*\*,\*\* indicates significant relationship at 10%, 5% and 1% signifincat level |