**S10 Table. Correlations among the first two principle components for each trait with the environmental characteristics of the experiments.** Significant correlations are indicated by \*<0.05, \*\*<0.01, and \*\*\*<0.001.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Soil volume | %Sand | %Silt | %Clay | Soil pH | Bulk density | Rainfall | Evaporation | Temp | Solar radiation | Relative humidity |
| yield PCA1 |  -  | -0.53 | 0.42 | 0.05 | 0.08 | -0.66 | 0.07 | -0.03 | -0.14 | -0.03 | 0.18 |
| yield PCA2 |  -  | -0.46 | 0.24 | 0.21 | 0.31 | 0.08 | 0.09 | -0.09 | -0.01 | -0.12 | 0.13 |
| RDW PCA1 |  -0.8\*\* | 0.7\* | -0.33 | -0.4 | -0.25 | -0.06 | -0.25 |  -0.92\* | 0.02 | -0.34 | 0.4 |
| RDW PCA2 | -0.48 | -0.54 | 0.08 | 0.47 |  -0.68\*\* | 0.56 | 0.17 | -0.58 | -0.29 | 0.2 | -0.33 |
| MRL PCA1 | -0.8 | 0.9\* |  -0.9\* |  -0.9\* | -0.69 | -0.99 | 0.04 |  -  | -0.05 |  -0.8\* | 0.73 |
| MRL PCA2 | -0.61 | 0.99\*\* |  -0.99\*\* |  -0.99\*\* | 0.35 | 0.89 | -0.27 |  -  | 0.6 | -0.72 | 0.98\*\*\* |
| %DR PCA1 | 0.03 |  -0.96\* | 0.96\* |  -0.96\* | -0.45 | -0.68 |  -  |  -  | 0.74\* | 0.52 | -0.6 |
| %DR PCA2 | 0.08 | 0.53 | -0.53 | 0.53 | -0.09 | 0.18 |  -  |  -  | -0.07 | -0.04 | 0.15 |