**S5 Table. Effects of soil environment of the source location (measured as the second axis of a principal component analysis of all soil parameters, PC2) and lineage membership and their interaction on mean quantitative trait expression in *Juncus effusus*.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N supply | T0 | | | | | | T70 | | | | | | T150 | | | | | |
| Functional traits | PC2 | | Lineage | | PC2×  lineage | | PC2 | | Lineage | | PC2×  lineage | | PC2 | | Lineage | | PC2×  lineage | |
| df | F | df | F | df | F | df | F | df | F | df | F | df | F | df | F | df | F |
| H | 1.15 | 0.2 | 1.15 | 2.2 | 1.15 | 2.4 | 1.7 | 0.6 | 1.7 | 0.2 | 1.7 | 0.7 | 1.11 | 3.9b | 1.11 | 2.5 | 1.11 | **10.9\*\*** |
| S | 1.16 | 0.5 | 1.15 | 1.4 | 1.16 | 0.0 | 1.44 | 0.9 | 1.43 | 2.7 | 1.44 | 2.3 | 1.11 | **13.7\*\*** | 1.11 | **21.5\*\*\*** | 1.11 | 1.8 |
| RGR | 1.16 | 0.0 | 1.15 | 0.3 | 1.16 | 0.9 | 1.44 | 1.2 | 1.44 | 0.1 | 1.44 | 0.1 | 1.11 | 0.7 | 1.11 | 0.0 | 1.11 | 0.3 |
| AGBM | 1.15 | 1.6 | 1.15 | 0.1 | 1.15 | 0.1 | 1.7 | 0.0 | 1.7 | 0.6 | 1.7 | 1.1 | 1.11 | 0.5 | 1.11 | 4.3 | 1.11 | 4.4 |
| BGBM | 1.16 | 0.6 | 1.15 | 1.9 | 1.16 | 0.03 | 1.7 | 0.1 | 1.7 | 0.5 | 1.7 | 1.1 | 1.11 | 3.5 | 1.11 | **5.7\* a** | 1.11 | 3.1 |
| LDMC | 1.15 | 0.4 | 1.15 | 0.2 | 1.15 | 0.2 | 1.7 | 0.1 | 1.7 | 0.6 | 1.7 | 0.9 | 1.11 | 0.4 | 1.11 | 2.4 | 1.11 | 0.3 |
| Root:Shoot | 1.16 | 1.0 | 1.15 | **14.1\*\*** | 1.16 | 0.0 | 1.7 | 1.2 | 1.7 | 0.2 | 1.7 | 1.0 | 1.11 | **5.1\*** | 1.11 | 0.1 | 1.11 | 0.5 |
| AG-C:N | 1.17 | 0.1 | 1.15 | 1.9 | 1.17 | 0.1 | 1.7 | **6.0\*a** | 1.7 | 0.7 | 1.7 | 0.0 | 1.11 | 2.0 | 1.11 | 0.0 | 1.11 | 0.0 |
| BG-C:N | 1.17 | 0.2 | 1.15 | 0.2 | 1.17 | 0.1 | 1.7 | **8.6\*a** | 1.7 | 2.1 | 1.7 | 0.6 | 1.11 | 3.4 | 1.11 | 1.1 | 1.11 | 0.8 |
| AG-N | 1.16 | 0.3 | 1.15 | 0.4 | 1.16 | 0.0 | 1.7 | 1.4 | 1.7 | 1.6 | 1.7 | 2.1 | 1.11 | 0.0 | 1.11 | 4.2 | 1.11 | **10.9\*\*** |
| pH | 1.20 | 1.6 | 1.16 | 0.1 | 1.20 | 0.2 | 1.42 | 0.0 | 1.42 | 0.4 | 1.42 | 0.3 | 1.11 | 0.0 | 1.11 | **5.8\* a** | 1.11 | 3.0 |
| POR | 1.83 | 0.2 | 1.85 | **4.3\* a** | 0.83 | 0.1 | 1.43 | 1.7 | 1.43 | **4.6\* a** | 1.43 | **7.3\*\*** | 1.11 | 0.0 | 1.11 | 0.4 | 1.11 | 0.0 |

Depicted are F values and significances in bold (\*P<0.05, \*\*P<0.01, \*\*\*P<0.001) based on linear models and respective analyses of variances. For trait explanations see Table S2. a – Not significant when using seed mass as covariate in the model. b – Becomes significant when using seed mass as covariate.