**Table S1.** Means and standard errors of the traits measured in *Plantago patagonica* offspring under the different treatment combinations.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **parental treatment** | **offspring treatment** | **TGP** | **mean** | **SE** |
| **root biomass** | control | control | CC | 0.382 | 0.017 |
| control | drought | CD | 0.246 | 0.012 |
| drought | control | DC | 0.407 | 0.015 |
| drought | drought | DD | 0.245 | 0.013 |
| **shoot biomass** | control | control | CC | 0.157 | 0.007 |
| control | drought | CD | 0.060 | 0.003 |
| drought | control | DC | 0.164 | 0.008 |
| drought | drought | DD | 0.057 | 0.003 |
| **total biomass** | control | control | CC | 0.539 | 0.020 |
| control | drought | CD | 0.306 | 0.014 |
| drought | control | DC | 0.571 | 0.019 |
| drought | drought | DD | 0.302 | 0.015 |
| **R:S ratio** | control | control | CC | 3.510 | 0.349 |
| control | drought | CD | 5.170 | 0.352 |
| drought | control | DC | 3.800 | 0.294 |
| drought | drought | DD | 4.980 | 0.278 |
| **max height** | control | control | CC | 4.910 | 0.110 |
| control | drought | CD | 4.720 | 0.102 |
| drought | control | DC | 5.170 | 0.123 |
| drought | drought | DD | 5.160 | 0.104 |
| **RGR** | control | control | CC | 1.200 | 0.027 |
| control | drought | CD | 1.040 | 0.022 |
| drought | control | DC | 1.240 | 0.033 |
| drought | drought | DD | 1.080 | 0.022 |
| **SLA** | control | control | CC | 109.110 | 2.110 |
| control | drought | CD | 115.400 | 3.710 |
| drought | control | DC | 106.370 | 2.120 |
| drought | drought | DD | 109.670 | 3.040 |
| **LDMC** | control | control | CC | 0.372 | 0.008 |
| control | drought | CD | 0.445 | 0.021 |
| drought | control | DC | 0.359 | 0.010 |
| drought | drought | DD | 0.400 | 0.019 |
| **mortality status** | control | control | CC | 0.161 | 0.020 |
| control | drought | CD | 0.120 | 0.020 |
| drought | control | DC | 0.199 | 0.023 |
| drought | drought | DD | 0.129 | 0.022 |
| **flowering status** | control | control | CC | 0.215 | 0.023 |
| control | drought | CD | 0.103 | 0.019 |
| drought | control | DC | 0.293 | 0.026 |
| drought | drought | DD | 0.174 | 0.024 |
| **seed mass** | control | control | CC | 0.037 | 0.004 |
| control | drought | CD | 0.021 | 0.003 |
| drought | control | DC | 0.046 | 0.004 |
| drought | drought | DD | 0.011 | 0.002 |
| **seed number** | control | control | CC | 46.752 | 4.411 |
| control | drought | CD | 28.289 | 4.693 |
| drought | control | DC | 55.892 | 4.545 |
| drought | drought | DD | 15.827 | 2.883 |
| **number of seedheads** | control | control | CC | 2.380 | 0.189 |
| control | drought | CD | 1.700 | 0.158 |
| drought | control | DC | 2.590 | 0.177 |
| drought | drought | DD | 1.630 | 0.137 |
| **days to flower** | control | control | CC | 41.112 | 1.378 |
| control | drought | CD | 42.629 | 2.004 |
| drought | control | DC | 40.211 | 1.042 |
| drought | drought | DD | 45.095 | 1.659 |

**Table S2.** Means and standard errors of the traits measured in *Plantago patagonica* offspring under the different treatment combinations by 30-year mean annual spring VPDmax (kPa).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **shoot biomass** | 2.096 | CC | 0.274 | 0.027 |
| CD | 0.099 | 0.014 |
| DC | 0.212 | 0.027 |
| DD | 0.095 | 0.021 |
| 2.171 | CC | 0.144 | 0.018 |
| CD | 0.085 | 0.014 |
| DC | 0.112 | 0.010 |
| DD | 0.019 | NA |
| 2.186 | CC | 0.182 | 0.02 |
| CD | 0.051 | 0.007 |
| DC | 0.177 | 0.016 |
| DD | 0.059 | 0.008 |
| 2.407 | CC | 0.156 | 0.017 |
| CD | 0.067 | 0.008 |
| DC | 0.172 | 0.071 |
| DD | 0.043 | 0.014 |
| 2.440 | CC | 0.160 | 0.018 |
| CD | 0.060 | 0.006 |
| DC | 0.236 | 0.018 |
| DD | 0.078 | 0.010 |
| 2.510 | CC | 0.168 | 0.014 |
| CD | 0.042 | 0.005 |
| DC | 0.153 | 0.017 |
| DD | 0.045 | 0.005 |
| 2.593 | CC | 0.174 | 0.050 |
| CD | 0.088 | 0.017 |
| DC | 0.181 | 0.017 |
| DD | 0.065 | 0.011 |
| 2.919 | CC | 0.095 | 0.012 |
| CD | 0.059 | 0.006 |
| DC | 0.088 | 0.008 |
| DD | 0.049 | 0.004 |
| 2.983 | CC | 0.105 | 0.031 |
| CD | 0.039 | 0.007 |
| DC | 0.460 | 0.195 |
| DD | 0.024 | 0.007 |
| 3.094 | CC | 0.199 | 0.020 |
| CD | 0.054 | 0.008 |
| DC | 0.223 | 0.019 |
| DD | 0.059 | 0.009 |
| 3.168 | CC | 0.064 | 0.026 |
| CD | 0.025 | 0.005 |
| DC | 0.042 | 0.010 |
| DD | 0.037 | 0.012 |

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| --- | --- | --- | --- | --- |
| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **R:S ratio** | 2.096 | CC | 1.594 | 0.218 |
| CD | 2.728 | 0.327 |
| DC | 2.440 | 0.447 |
| DD | 2.801 | 0.516 |
| 2.171 | CC | 2.750 | 0.357 |
| CD | 4.302 | 0.726 |
| DC | 4.035 | 1.210 |
| DD | 5.599 | NA |
| 2.186 | CC | 4.184 | 2.420 |
| CD | 6.317 | 0.674 |
| DC | 3.663 | 0.691 |
| DD | 4.989 | 0.469 |
| 2.407 | CC | 3.494 | 0.469 |
| CD | 4.564 | 0.398 |
| DC | 6.529 | 3.543 |
| DD | 5.649 | 1.788 |
| 2.440 | CC | 3.558 | 0.491 |
| CD | 3.372 | 0.483 |
| DC | 2.102 | 0.188 |
| DD | 4.502 | 0.729 |
| 2.510 | CC | 2.745 | 0.358 |
| CD | 5.368 | 0.624 |
| DC | 3.660 | 1.062 |
| DD | 6.604 | 0.984 |
| 2.593 | CC | 2.501 | 0.812 |
| CD | 3.492 | 0.324 |
| DC | 3.424 | 0.617 |
| DD | 4.207 | 0.509 |
| 2.919 | CC | 4.437 | 0.510 |
| CD | 4.497 | 1.009 |
| DC | 5.156 | 0.641 |
| DD | 3.686 | 0.469 |
| 2.983 | CC | 6.951 | 2.251 |
| CD | 9.119 | 4.418 |
| DC | 1.078 | 0.112 |
| DD | 6.066 | 0.116 |
| 3.094 | CC | 1.873 | 0.198 |
| CD | 6.885 | 1.419 |
| DC | 2.291 | 0.348 |
| DD | 5.252 | 0.550 |
| 3.168 | CC | 5.576 | 1.287 |
| CD | 6.088 | 2.337 |
| DC | 7.760 | 1.777 |
| DD | 7.200 | 1.852 |

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| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **maximum vegetative height** | 2.096 | CC | 3.876 | 0.619 |
| CD | 5.074 | 0.409 |
| DC | 5.380 | 0.582 |
| DD | 5.831 | 0.525 |
| 2.171 | CC | 3.536 | 0.344 |
| CD | 3.411 | 0.452 |
| DC | 3.538 | 1.039 |
| DD | 1.550 | 0.843 |
| 2.186 | CC | 4.570 | 0.277 |
| CD | 4.030 | 0.274 |
| DC | 4.942 | 0.348 |
| DD | 5.008 | 0.313 |
| 2.407 | CC | 5.305 | 0.395 |
| CD | 5.175 | 0.375 |
| DC | 3.800 | 1.088 |
| DD | 2.029 | 0.942 |
| 2.440 | CC | 5.725 | 0.435 |
| CD | 4.789 | 0.441 |
| DC | 4.297 | 0.566 |
| DD | 4.643 | 0.443 |
| 2.510 | CC | 5.109 | 0.238 |
| CD | 4.172 | 0.326 |
| DC | 4.965 | 0.333 |
| DD | 4.719 | 0.284 |
| 2.593 | CC | 4.223 | 0.728 |
| CD | 3.113 | 0.542 |
| DC | 5.595 | 0.464 |
| DD | 5.143 | 0.463 |
| 2.919 | CC | 7.855 | 0.601 |
| CD | 6.948 | 0.522 |
| DC | 7.146 | 0.489 |
| DD | 6.964 | 0.369 |
| 2.983 | CC | 3.496 | 0.502 |
| CD | 6.243 | 0.275 |
| DC | 1.850 | 0.720 |
| DD | 5.567 | 1.233 |
| 3.094 | CC | 5.000 | 0.348 |
| CD | 4.720 | 0.349 |
| DC | 5.056 | 0.460 |
| DD | 4.959 | 0.447 |
| 3.168 | CC | 3.538 | 0.739 |
| CD | 5.557 | 0.646 |
| DC | 4.279 | 0.581 |
| DD | 5.923 | 0.509 |

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| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **SLA** | 2.096 | CC | 98.843 | 7.933 |
| CD | 128.575 | 16.690 |
| DC | 97.276 | 6.376 |
| DD | 110.588 | 9.491 |
| 2.171 | CC | 105.631 | 8.810 |
| CD | 144.633 | 13.801 |
| DC | 102.969 | 16.106 |
| DD | 89.209 | NA |
| 2.186 | CC | 116.535 | 6.349 |
| CD | 114.302 | 8.053 |
| DC | 111.169 | 4.882 |
| DD | 120.961 | 8.554 |
| 2.407 | CC | 106.835 | 4.583 |
| CD | 112.410 | 8.359 |
| DC | 107.163 | 18.731 |
| DD | 77.368 | 9.756 |
| 2.440 | CC | 117.451 | 9.117 |
| CD | 110.106 | 13.142 |
| DC | 125.364 | 10.378 |
| DD | 132.747 | 10.110 |
| 2.510 | CC | 118.603 | 4.640 |
| CD | 113.134 | 13.465 |
| DC | 101.707 | 3.852 |
| DD | 115.347 | 8.931 |
| 2.593 | CC | 119.445 | 13.029 |
| CD | 115.796 | 11.208 |
| DC | 104.441 | 2.792 |
| DD | 114.585 | 6.301 |
| 2.919 | CC | 93.127 | 2.022 |
| CD | 90.147 | 4.031 |
| DC | 100.103 | 5.178 |
| DD | 90.888 | 3.196 |
| 2.983 | CC | 93.251 | 5.491 |
| CD | 119.989 | 11.680 |
| DC | NA | NA |
| DD | 85.851 | NA |
| 3.094 | CC | 118.374 | 5.205 |
| CD | 116.499 | 12.789 |
| DC | 100.455 | 5.609 |
| DD | 113.902 | 13.535 |
| 3.168 | CC | 79.016 | 5.850 |
| CD | 125.178 | 35.489 |
| DC | 132.014 | 12.523 |
| DD | 108.120 | 3.366 |

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| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **mortality status** | 2.096 | CC | 0.400 | 0.112 |
| CD | 0.111 | 0.076 |
| DC | 0.250 | 0.099 |
| DD | 0.000 | 0.000 |
| 2.171 | CC | 0.121 | 0.058 |
| CD | 0.158 | 0.086 |
| DC | 0.222 | 0.147 |
| DD | 0.500 | 0.289 |
| 2.186 | CC | 0.098 | 0.047 |
| CD | 0.128 | 0.054 |
| DC | 0.085 | 0.041 |
| DD | 0.079 | 0.044 |
| 2.407 | CC | 0.108 | 0.052 |
| CD | 0 | 0 |
| DC | 0.444 | 0.176 |
| DD | 0.700 | 0.153 |
| 2.440 | CC | 0.088 | 0.049 |
| CD | 0.107 | 0.06 |
| DC | 0.394 | 0.086 |
| DD | 0.167 | 0.078 |
| 2.510 | CC | 0.044 | 0.031 |
| CD | 0.162 | 0.061 |
| DC | 0.174 | 0.057 |
| DD | 0.024 | 0.024 |
| 2.593 | CC | 0.231 | 0.122 |
| CD | 0.250 | 0.112 |
| DC | 0.132 | 0.056 |
| DD | 0.133 | 0.063 |
| 2.919 | CC | 0.182 | 0.068 |
| CD | 0.074 | 0.051 |
| DC | 0.136 | 0.052 |
| DD | 0.065 | 0.045 |
| 2.983 | CC | 0.385 | 0.097 |
| CD | 0 | 0 |
| DC | 0.667 | 0.211 |
| DD | 0.250 | 0.250 |
| 3.094 | CC | 0.152 | 0.063 |
| CD | 0.086 | 0.048 |
| DC | 0.171 | 0.065 |
| DD | 0.188 | 0.070 |
| 3.168 | CC | 0.267 | 0.118 |
| CD | 0.333 | 0.167 |
| DC | 0.211 | 0.096 |
| DD | 0.077 | 0.077 |

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| --- | --- | --- | --- | --- |
| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **flowering status** | 2.096 | CC | 0.050 | 0.050 |
| CD | NA | NA |
| DC | 0.200 | 0.092 |
| DD | 0.000 | 0.000 |
| 2.171 | CC | 0.061 | 0.042 |
| CD | NA | NA |
| DC | 0.333 | 0.167 |
| DD | 0.250 | 0.250 |
| 2.186 | CC | 0.024 | 0.024 |
| CD | NA | NA |
| DC | 0.188 | 0.057 |
| DD | 0.135 | 0.057 |
| 2.407 | CC | 0.432 | 0.083 |
| CD | 0.296 | 0.090 |
| DC | 0.333 | 0.167 |
| DD | 0.100 | 0.100 |
| 2.440 | CC | 0.265 | 0.077 |
| CD | 0.074 | 0.051 |
| DC | 0.121 | 0.058 |
| DD | 0.042 | 0.042 |
| 2.510 | CC | 0.044 | 0.031 |
| CD | NA | NA |
| DC | 0.152 | 0.054 |
| DD | 0.000 | 0.000 |
| 2.593 | CC | NA | NA |
| CD | NA | NA |
| DC | 0.368 | 0.079 |
| DD | 0.133 | 0.063 |
| 2.919 | CC | 0.697 | 0.081 |
| CD | 0.593 | 0.096 |
| DC | 0.705 | 0.070 |
| DD | 0.636 | 0.085 |
| 2.983 | CC | 0.385 | 0.097 |
| CD | 0.143 | 0.143 |
| DC | 0.000 | 0.000 |
| DD | 0.250 | 0.250 |
| 3.094 | CC | 0.030 | 0.030 |
| CD | NA | NA |
| DC | 0.171 | 0.065 |
| DD | 0.063 | 0.043 |
| 3.168 | CC | 0.400 | 0.131 |
| CD | NA | NA |
| DC | 0.474 | 0.118 |
| DD | 0.462 | 0.144 |

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| --- | --- | --- | --- | --- |
| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **seed number** | 2.096 | CC | 30.606 | NA |
| CD | NA | NA |
| DC | 65.314 | 34.492 |
| DD | NA | NA |
| 2.171 | CC | 25.603 | NA |
| CD | NA | NA |
| DC | 30.105 | 11.525 |
| DD | 1.000 | NA |
| 2.186 | CC | 42.305 | 7.354 |
| CD | NA | NA |
| DC | 62.072 | 26.527 |
| DD | 18.776 | 4.737 |
| 2.407 | CC | 52.161 | 11.216 |
| CD | 26.924 | 7.302 |
| DC | 50.886 | 14.982 |
| DD | 21 | NA |
| 2.440 | CC | 59.816 | 11.086 |
| CD | 29.937 | 14.937 |
| DC | 54.695 | 19.504 |
| DD | NA | NA |
| 2.510 | CC | 8.000 | NA |
| CD | NA | NA |
| DC | 47.963 | 11.622 |
| DD | NA | NA |
| 2.593 | CC | NA | NA |
| CD | NA | NA |
| DC | 62.637 | 8.997 |
| DD | 29.684 | 11.934 |
| 2.919 | CC | 55.053 | 8.524 |
| CD | 31.235 | 6.717 |
| DC | 52.921 | 8.004 |
| DD | 16.150 | 5.345 |
| 2.983 | CC | 26.276 | 8.070 |
| CD | 1.000 | NA |
| DC | NA | NA |
| DD | 25.000 | NA |
| 3.094 | CC | 42.719 | 9.632 |
| CD | NA | NA |
| DC | 75.964 | 19.674 |
| DD | 6.667 | 2.404 |
| 3.168 | CC | 34.405 | 9.615 |
| CD | NA | NA |
| DC | 49.312 | 10.100 |
| DD | 7.200 | 3.072 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **trait** | **vpd (kPa)** | **TGP** | **mean** | **SE** |
| **days to flower** | 2.096 | CC | 36.000 | NA |
| CD | NA | NA |
| DC | 46.250 | 9.978 |
| DD | NA | NA |
| 2.171 | CC | 43.500 | 3.500 |
| CD | NA | NA |
| DC | 46.000 | 1 |
| DD | 47.000 | NA |
| 2.186 | CC | 66.000 | NA |
| CD | NA | NA |
| DC | 40.333 | 3.009 |
| DD | 47.600 | 2.502 |
| 2.407 | CC | 39.438 | 2.697 |
| CD | 48.625 | 2.771 |
| DC | 41.000 | 3.786 |
| DD | 35.000 | NA |
| 2.440 | CC | 37.556 | 2.450 |
| CD | 39.500 | 0.500 |
| DC | 42.000 | 3.000 |
| DD | 49 | NA |
| 2.510 | CC | 53.500 | 5.500 |
| CD | NA | NA |
| DC | 46.143 | 3.882 |
| DD | NA | NA |
| 2.593 | CC | NA | NA |
| CD | NA | NA |
| DC | 44.714 | 2.053 |
| DD | 48.000 | 7.141 |
| 2.919 | CC | 38.478 | 2.451 |
| CD | 40.125 | 2.872 |
| DC | 34.065 | 1.258 |
| DD | 43.286 | 2.584 |
| 2.983 | CC | 44.700 | 3.229 |
| CD | 41.000 | NA |
| DC | NA | NA |
| DD | 52.000 | NA |
| 3.094 | CC | 35.000 | NA |
| CD | NA | NA |
| DC | 41.667 | 3.169 |
| DD | 44.000 | 1.000 |
| 3.168 | CC | 47.833 | 7.035 |
| CD | NA | NA |
| DC | 43.000 | 4.485 |
| DD | 47.333 | 5.358 |