**TABLE S1**. Results from the quase-binomial GLM for germination and viability of grass species in response to heat shock (HS), temperature fluctuation (TF) and the longevity (Long 6 and Long 12) in response to stored seeds from 6 and 12 months.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Species | Treatment | Germination | |  | Viability | |  |
|  |  | df | Deviance (x²) | *P*-value | df | Deviance (x²) | *P*-value |
| *Andropogon bicornis* | 100°C 1' | 19 | 12.403 | 0.762 | 19 | 3.533 | 0.109 |
| 100°C 3' | 19 | 12.403 | 0.651 | 19 | 3.533 | 0.217 |
| 200°C | 19 | 12.403 | 0.985 | 19 | 3.533 | 0.0001 |
| TF | 7 | 0.400 | 0.079 | 7 | 0.260 | 0.07 |
| Long 6 | 5 | 0.306 | 0.284 | 5 | 0.461 | 0.391 |
| Long 12 | 7 | 0.825 | 0.996 | 7 | 1.269 | 0.993 |
| *Andropogon lateralis* | 100°C 1' | 19 | 15.95 | 0.100 | 19 | 16.259 | 0.066 |
| 100°C 3' | 20 | 15.96 | 0.004 | 19 | 16.259 | 0.005 |
| 200°C | 21 | 15.97 | 0.995 | 19 | 16.259 | 0.995 |
| TF | 7 | 0.695 | 0.001 | 7 | 0.219 | 0.468 |
| Long 6 | 5 | 0.734 | 0.154 | 5 | 0.593 | 0.154 |
| Long 12 |  | 1.924 | 0.027 | 7 | 1.542 | 0.028 |
| *Aristida megapotamica* | 100°C 1' | 19 | 4.001 | 0.317 | 19 | 4.682 | 0.703 |
| 100°C 3' | 19 | 4.001 | 0.303 | 19 | 4.682 | 0.464 |
| 200°C | 19 | 4.001 | 0.489 | 19 | 4.682 | 0.260 |
| TF | 7 | 0.445 | 0.058 | 7 | 0.509 | 0.147 |
| Long 6 | 5 | 1.843 | 0.005 | 5 | 1.930 | 0.015 |
| Long 12 | 7 | 4.502 | 0.0005 | 7 | 4.459 | 0.019 |
| *Aristida riparia* | 100°C 1' | 19 | 3.306 | 0.584 | 19 | 3.162 | 0.777 |
| 100°C 3' | 19 | 3.306 | 0.132 | 19 | 3.162 | 0.205 |
| 200°C | 19 | 3.306 | 0.152 | 19 | 3.162 | 0.021 |
| TF | 7 | 0.569 | 0.060 | 7 | 0.360 | 0.45 |
| Long 6 | 5 | 0.990 | 0.022 | 5 | 1.180 | 0.011 |
| Long 12 | 7 | 0.986 | 0.014 | 7 | 0.961 | 0.03 |
| *Aristida jubata* | 100°C 1' | 19 | 7.236 | 0.174 | 19 | 7.236 | 0.174 |
| 100°C 3' | 19 | 7.236 | 0.948 | 19 | 7.236 | 0.948 |
| 200°C | 19 | 7.236 | 0.033 | 19 | 7.236 | 0.033 |
| TF | 7 | 1.118 | 0.594 | 7 | 1.044 | 0.653 |
| *Axonopus aureus* | TF | 7 | 1.987 | 0.011 | 7 | 0.478 | 0.055 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Secies | Treatment | Germination | |  | Viability | |  |
|  |  | df | Deviance (x²) | *P*-value | df | Deviance (x²) | *P*-value |
| *Gymnopogon foliosus* | 100°C 1' | 19 | 1.758 | 0.264 | 19 | 1.776 | 0.705 |
| 100°C 3' | 19 | 1.758 | 0.164 | 19 | 1.776 | 0.988 |
| 200°C | 19 | 1.758 | 0.089 | 19 | 1.776 | 0.587 |
| TF | 7 | 0.861 | 0.421 | 7 | 0.266 | 0.615 |
| Long 6 | 5 | 0.765 | 0.399 | 5 | 0.201 | 0.308 |
| Long 12 | 7 | 1.502 | 0.134 | 7 | 1.832 | 0.108 |
| *Loudetiopsis chrysothrix* | 100°C 1' | 19 | 3.21 | 0.521 | 19 | 6.060 | 0.502 |
| 100°C 3' | 19 | 3.21 | 0.1291 | 19 | 6.060 | 0.633 |
| 200°C | 19 | 3.21 | 0.028 | 19 | 6.060 | 0.0001 |
| TF | 7 | 0.695 | 0.001 | 7 | 0.695 | 0.468 |
| Long 12 | 7 | 0.957 | 0.002 | 7 | 0.472 | 0.016 |
| *Sporobolus aeneus* | 100°C 1' | 19 | 6.942 | 0.328 | 19 | 7.011 | 0.350 |
| 100°C 3' | 19 | 6.942 | 0.02 | 19 | 7.011 | 0.050 |
| 200°C | 19 | 6.942 | 0.995 | 19 | 7.011 | 0.995 |
| TF | 7 | 0.320 | 0.156 | 7 | 0.464 | 0.137 |
| Long 6 | 5 | 0.099 | 0.918 | 5 | 0.711 | 0.967 |
| Long 12 | 7 | 0.655 | 0.020 | 7 | 0.561 | 0.050 |
| *Sporobolus cubensis* | 100°C 1' | 19 | 4.987 | 0.426 | 19 | 2.078 | 0.120 |
| 100°C 3' | 19 | 4.987 | 0.726 | 19 | 2.078 | 0.546 |
| 200°C | 19 | 4.987 | 0.006 | 19 | 2.078 | 0.047 |
| TF | 7 | 4.592 | 0.006 | 7 | 0.442 | 0.644 |