**Supplementary Table S1.** Comparing the differences, estimate and P-values, of the curve parameters *b*, *d* and *e* estimated in the two experiments (Run1 and Run2) using Equation [1]:$ f(t)=d/1+(exp(b(log⁡(t)-log⁡(e)))$, where *d* is the maximum sprouting; *e* is the time (days) at which 50% of the rhizomes had sprouted, and *b* is an absolute value proportional to the slope of *f* at time *t*, for different *Solanum elaeagnifolium* rhizome length (Length) and temperatures (Temp).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter *e* comparison | Parameter *d* comparison | Parameter *b* comparison | Temp  | Length  |
| P-value | Estimate | P-value | Estimate | P-value | Estimate | (C) | (cm) |
|  |  |  |  |  |  |  |  |
| **0.013\*** | **-1.93**  | 0.405 | -0.082  | **0.03\*** | **-38.40**  | 15 | 2.5 |
| 0.12 | 0.78  | 0.80 | -0.02  | **0.04\*** | **29.25**  | 20 |  |
| **0.001\*** | **-2.74**  | 0.81 | 0.02  | 0.54 | -2.62  | 25 |  |
| **0.018\*** | **-1.60**  | 0.81 | -0.02  | 0.62 | 0.90  | 30 |  |
| **0.001\*** | **-2.03**  | 0.78 | 0.02  | 0.4 | 1.55  | 35 |  |
| NA | NA | NA | NA | NA | NA | 40 |  |
|  |  |  |  |  |  |  |  |
| **0.001\*** | **-3.13**  | 0.8 | -0.02  | 0.30 | -7.04  | 15 | 5 |
| 0.36 | 0.82  | 0.14 | -0.17  | **0.005\*** | **7.05**  | 20 |  |
| 0.78 | -0.12  | 0.8 | 0.02  | 0.4 | 2.37  | 25 |  |
| 0.89 | -0.79  | 0.81 | 0.03  | 0.9 | 0.17  | 30 |  |
| **0.04\*** | **-0.87**  | 0.74 | -0.02  | **0.05\*** | **3.05**  | 35 |  |
| 0.97 | 0.02  | 0.63 | 0.05  | 0.46 | -1.54  | 40 |  |
|  |  |  |  |  |  |  |  |
| **0.001\*** | **1.57**  | 0.33 | -0.11  | 0.30 | -9.63  | 15 | 7.5 |
| 0.16 | 0.78  | 0.62 | -0.05  | 0.8 | 0.64  | 20 |  |
| 0.24 | 0.38  | 0.86 | -0.01  | 0.65 | 1.12  | 25 |  |
| 0.07 | -0.07  | 0.75 | 0.02  | 0.64 | 1.14  | 30 |  |
| **0.001\*** | **-1.18**  | 0.72 | 0.02  | 0.39 | 1.54  | 35 |  |
| **0.007\*** | **-1.16**  | 0.81 | -0.02  | 0.06 | -3.87  | 40 |  |
|  |  |  |  |  |  |  |  |
| 0.7 | -0.20  | 0.33 | 0.03  | 0.66 | 1.70  | 15 | 10 |
| 0.48 | -0.37  | 0.76 | -0.02  | 0.08 | -2.82  | 20 |  |
| 0.7 | -0.2  | 0.81 | 0.03  | 0.2 | 2.00  | 25 |  |
| 0.65 | 0.13  | - | 0.00  | 0.46 | -0.88  | 30 |  |
| 0.18 | 0.34  | - | 0.00  | 0.69 | -0.56  | 35 |  |
| 0.40 | 0.40  | 0.46 | -0.08  | 0.1 | 2.70  | 40 |  |

**\***Significant comparisons P ≤ 0.05



 **Supplementary Figure S1**. Comparison of estimated cardinal temperatures *Tb* (base temperature), *To* (optimal temperature), *Tc* (ceiling temperature) and *a* (shape parameter) and their corresponding 95% confidence intervals for different *Solanum elaeagnifolium* rhizome length in the two experiments (Run1 and Run2) according to the four tested models: (A) 'FIXED *Tc* MODEL', (B) 'VARIABLE *Tc* MODEL', (C) 'VARIABLE *To* MODEL', and (D) 'VARIABLE *Tb, To, Tc* MODEL'