**Table S1.** ANOVA results by species for final germination proportion. Results are presented from minimal adequate generalized linear models. The maximal model for the four species with only one population included the following predictors and interactions: Strat Length + Strat Temp + Inc. Temp + Storage + Strat Length:Strat Temp + Strat Length:Inc. Temp + Strat.Length:Storage + Strat Temp:Inc. Temp + Strat Temp:Storage + Inc. Temp:Storage + Storage:Strat Length:Strat Temp + Storage:Strat Length:Inc. Temp + Storage:Strat Temp:Inc. Temp. For *Dieteria canescens* and *Plantago patagonica* the maximal model included all factors and interactions considered in the previous model as well as the following terms: Population + Population:Storage + Population:Strat Length + Population:Strat Temp + Population:Inc. Temp + Storage:Population:Strat Length + Storage:Population:Strat Temp + Storage:Population:Inc. Temp. Temp. F-values are included for models with a quasibinomial family.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **df** | **Deviance** | **F** | ***P*** |
| ***Dieteria canescens*** |  |  |  |  |
| Storage | 1 | 0.98 |  | 0.30 |
| Population | 1 | 200.71 |  | **<0.001** |
| Stratification Length | 1 | 0.69 |  | 0.41 |
| Stratification Temp | 3 | 83.99 |  | **<0.001** |
| Incubation Temp | 1 | 15.42 |  | **<0.001** |
| Storage x Stratification Temp | 3 | 3.32 |  | 0.35 |
| Storage x Incubation Temp | 1 | 5.63 |  | **0.02** |
| Stratification Length x Stratification Temp | 2 | 8.98 |  | **0.01** |
| Stratification Temp x Incubation Temp | 3 | 11.33 |  | **0.01** |
| Population x Stratification Length | 1 | 10.08 |  | **0.001** |
| Population x Incubation Temp | 1 | 7.65 |  | **<0.01** |
| Storage x Stratification Temp x Incubation Temp | 3 | 11.71 |  | **0.008** |
|  |  |  |  |  |
| ***Heliomeris multiflora*** |  |  |  |  |
| Stratification Length | 1 | 152.48 | 135.70 | **<0.001** |
| Stratification Temp | 3 | 53.09 | 15.75 | **<0.001** |
| Incubation Temp | 1 | 3.07 | 2.73 | 0.10 |
| Stratification Length x Stratification Temp | 2 | 20.30 | 9.03 | **<0.001** |
| Stratification Length x Incubation Temp | 1 | 2.64 | 2.35 | 0.13 |
|  |  |  |  |  |
| ***Packera multilobata*** |  |  |  |  |
| Storage | 1 | 1.94 | 1.17 | 0.28 |
| Stratification Length | 1 | 22.59 | 13.67 | **<0.001** |
| Stratification Temp | 3 | 34.48 | 6.95 | **<0.001** |
| Incubation Temp | 1 | 16.68 | 10.09 | **<0.01** |
| Storage x Stratification Length | 1 | 8.09 | 4.90 | **0.03** |
| Storage x Incubation Temp | 1 | 4.30 | 2.60 | 0.11 |
| Stratification Length x Stratification Temp | 2 | 8.43 | 2.55 | 0.08 |
| Stratification Length x Incubation Temp | 1 | 2.59 | 1.57 | 0.21 |
| Stratification Temp x Incubation Temp | 3 | 26.62 | 5.37 | **0.002** |
|  |  |  |  |  |
| ***Penstemon comarrhenus*** |  |  |  |  |
| Stratification Length | 1 | 309.56 | 212.13 | **<0.001** |
| Stratification Temp | 3 | 67.13 | 15.33 | **<0.001** |
| Incubation Temp | 1 | 3.60 | 2.47 | 0.12 |
| Stratification Temp x Incubation Temp | 3 | 10.14 | 2.32 | 0.08 |
|  |  |  |  |  |
| ***Plantago patagonica*** |  |  |  |  |
| Storage | 1 | 2.58 | 1.93 | 0.17 |
| Population | 1 | 686.03 | 513.93 | **<0.001** |
| Stratification Length | 1 | 10.87 | 8.14 | **0.005** |
| Stratification Temp | 3 | 239.72 | 59.86 | **<0.001** |
| Incubation Temp | 1 | 68.52 | 51.33 | **<0.001** |
| Storage x Stratification Length | 1 | 2.36 | 1.77 | 0.18 |
| Storage x Stratification Temp | 3 | 7.09 | 1.77 | 0.15 |
| Storage x Population | 1 | 2.19 | 1.64 | 0.20 |
| Stratification Length x Stratification Temp | 2 | 21.44 | 8.03 | **<0.001** |
| Stratification Temp x Incubation Temp | 3 | 13.28 | 3.32 | **0.02** |
| Population x Stratification Length | 1 | 69.83 | 52.31 | **<0.001** |
| Population x Stratification Temp | 3 | 69.26 | 17.29 | **<0.001** |
| Population x Incubation Temp | 1 | 27.27 | 20.43 | **<0.001** |
| Storage x Population x Stratification Temp | 3 | 8.52 | 2.13 | 0.10 |
| Storage x Stratification Length x Stratification Temp | 2 | 8.95 | 3.35 | **0.04** |
|  |  |  |  |  |
| ***Sphaeralcea parvifolia*** |  |  |  |  |
| Storage | 1 | 9.15 | 7.44 | **<0.01** |
| Stratification Length | 1 | 30.34 | 24.67 | **<0.001** |
| Stratification Temp | 3 | 6.58 | 1.78 | 0.15 |
| Incubation Temp | 1 | 12.08 | 9.82 | **<0.01** |
| Stratification Length x Incubation Temp | 1 | 2.75 | 2.24 | 0.14 |
|  |  |  |  |  |

**Table S2.** ANOVA results by species for germination during stratification. Results are presented from minimal adequate generalized linear models. The maximal model for the four species with one population included the following predictors and interactions: Strat Length + Strat Temp + Storage + Strat Length:Strat Temp + Strat Length:Storage + Strat Temp:Storage + Storage:Strat Length:Strat Temp. The maximal model for *D. canescens* and *P. patagonica* included all factors and interactions considered in the previous model as well as the following terms: Population + Population:Storage + Population:Strat Length + Population:Strat Temp + Storage:Population:Strat Length + Storage:Population:Strat Temp. F-values are included for models with a quasibinomial family.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **df** | **Deviance** | **F** | ***P*** |
| ***Dieteria canescens*** |  |  |  |  |
| Storage | 1 | 10.35 | 6.97 | **0.009** |
| Population | 1 | 183.74 | 123.69 | **<0.001** |
| Stratification Length | 1 | 13.44 | 9.05 | **<0.01** |
| Stratification Temp | 1 | 787.45 | 530.08 | **<0.001** |
| Storage x Stratification Length | 1 | 4.98 | 3.36 | 0.07 |
| Storage x Stratification Temp | 1 | 2.49 | 1.67 | 0.20 |
| Storage x Population | 1 | 11.15 | 7.51 | **<0.01** |
| Stratification Length x Stratification Temp | 1 | 3.10 | 2.09 | 0.15 |
| Population x Stratification Length | 1 | 82.70 | 55.67 | **<0.001** |
| Population x Stratification Temp | 1 | 2.55 | 1.72 | 0.19 |
| Storage x Population x Stratification Temp | 1 | 6.37 | 4.29 | **0.04** |
|  |  |  |  |  |
| ***Heliomeris multiflora*** |  |  |  |  |
| Storage | 1 | 1.04 | 0.68 | 0.41 |
| Stratification Length | 1 | 166.47 | 107.80 | **<0.001** |
| Stratification Temp | 1 | 1.57 | 1.02 | 0.32 |
| Storage x Stratification Length | 1 | 2.35 | 1.52 | 0.22 |
| Storage x Stratification Temp | 1 | 1.52 | 0.99 | 0.32 |
| Stratification Length x Stratification Temp | 1 | 13.71 | 8.88 | **<0.01** |
|  |  |  |  |  |
| ***Packera multilobata*** |  |  |  |  |
| Storage | 1 | 0.32 | 0.08 | 0.77 |
| Stratification Length | 1 | 47.07 | 12.39 | **<0.001** |
| Stratification Temp | 1 | 405.68 | 106.77 | **<0.001** |
| Storage x Stratification Length | 1 | 6.17 | 1.62 | 0.21 |
| Stratification Length x Stratification Temp | 1 | 48.99 | 12.89 | **<0.001** |
|  |  |  |  |  |
| ***Penstemon comarrhenus*** |  |  |  |  |
| Storage | 1 | 4.09 | 4.14 | **0.04** |
| Stratification Length | 1 | 277.71 | 280.85 | **<0.001** |
| Stratification Temp | 1 | 279.99 | 283.15 | **<0.001** |
| Storage x Stratification Length | 1 | 0.004 | 0.004 | 0.95 |
| Storage x Stratification Temp | 1 | 0.26 | 0.26 | 0.61 |
| Stratification Length x Stratification Temp | 1 | 1.59 | 1.61 | 0.21 |
| Storage x Stratification Length x Stratification Temp | 1 | 5.50 | 5.56 | **0.02** |
|  |  |  |  |  |
| ***Plantago patagonica*** |  |  |  |  |
| Storage | 1 | 7.70 |  | **<0.01** |
| Population | 1 | 27.04 |  | **<0.001** |
| Stratification Length | 1 | 3.06 |  | 0.08 |
| Stratification Temp | 1 | 21.07 |  | **<0.001** |
| Storage x Stratification Length | 1 | 0.54 |  | 0.46 |
| Storage x Stratification Temp | 1 | 4.95 |  | **0.03** |
| Stratification Length x Stratification Temp | 1 | 0.01 |  | 0.91 |
| Population x Stratification Length | 1 | 35.71 |  | **<0.001** |
| Population x Stratification Temp | 1 | 2.14 |  | 0.14 |
|  |  |  |  |  |
| ***Sphaeralcea parvifolia*** |  |  |  |  |
| Storage | 1 | 7.46 |  | **<0.01** |
| Stratification Length | 1 | 32.47 |  | **<0.001** |
| Stratification Temp | 1 | 137.81 |  | **<0.001** |
|  |  |  |  |  |

**Table S3.** Results of time to 50 % of maximum germination (T50) analysis by species and temperature combinations. T50 numbers are based on length of each stratification treatment, with day 0 being the day when seeds went into stratification for each treatment. The analysis was done to include stratification, as for some species and treatments, T50 occurred in stratification.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **Strat Length** | **Strat Temp** | **Inc Temp** | **Storage** | **t50** | **Treatment length (days)** |  | **ID** | **Strat Length** | **Strat Temp** | **Inc Temp** | **Storage** | **t50** | **Treatment length (days)** |
| DICA\_NM | 0 | NS | 20/10 | -20°C | 5 | 16 |  | PAMU | 8 | 3 | 20/10 | -20°C | 58 | 72 |
| DICA\_NM | 0 | NS | 20/10 | 15°C | 4 | 16 |  | PAMU | 8 | 3 | 20/10 | 15°C | 61 | 72 |
| DICA\_NM | 0 | NS | 25/15 | -20°C | 3 | 16 |  | PAMU | 8 | 3 | 25/15 | -20°C | 48 | 72 |
| DICA\_NM | 0 | NS | 25/15 | 15°C | 3 | 16 |  | PAMU | 8 | 3 | 25/15 | 15°C | 59 | 72 |
| DICA\_NM | 2 | 3 | 20/10 | -20°C | 16 | 30 |  | PAMU | 10 | 3 | 20/10 | -20°C | 60 | 86 |
| DICA\_NM | 2 | 3 | 20/10 | 15°C | 17 | 30 |  | PAMU | 10 | 3 | 20/10 | 15°C | 62 | 86 |
| DICA\_NM | 2 | 3 | 25/15 | -20°C | 16 | 30 |  | PAMU | 10 | 3 | 25/15 | -20°C | 59 | 86 |
| DICA\_NM | 2 | 3 | 25/15 | 15°C | 16 | 30 |  | PAMU | 10 | 3 | 25/15 | 15°C | 60 | 86 |
| DICA\_NM | 2 | 6 | 20/10 | -20°C | 16 | 30 |  | PECO | 0 | NS | 20/10 | -20°C | 9 | 16 |
| DICA\_NM | 2 | 6 | 20/10 | 15°C | 2 | 30 |  | PECO | 0 | NS | 20/10 | 15°C | 14 | 16 |
| DICA\_NM | 2 | 6 | 25/15 | -20°C | 9 | 30 |  | PECO | 0 | NS | 25/15 | -20°C | 8 | 16 |
| DICA\_NM | 2 | 6 | 25/15 | 15°C | 2 | 30 |  | PECO | 0 | NS | 25/15 | 15°C | 16 | 16 |
| DICA\_NM | 2 | 9 | 20/10 | -20°C | 3 | 30 |  | PECO | 2 | 3 | 20/10 | -20°C | 19 | 30 |
| DICA\_NM | 2 | 9 | 20/10 | 15°C | 3 | 30 |  | PECO | 2 | 3 | 20/10 | 15°C | 21 | 30 |
| DICA\_NM | 2 | 9 | 25/15 | -20°C | 3 | 30 |  | PECO | 2 | 3 | 25/15 | -20°C | 19 | 30 |
| DICA\_NM | 2 | 9 | 25/15 | 15°C | 3 | 30 |  | PECO | 2 | 3 | 25/15 | 15°C | 20 | 30 |
| DICA\_NM | 4 | 3 | 20/10 | -20°C | 27 | 44 |  | PECO | 2 | 6 | 20/10 | -20°C | 24 | 30 |
| DICA\_NM | 4 | 3 | 20/10 | 15°C | 27 | 44 |  | PECO | 2 | 6 | 20/10 | 15°C | 24 | 30 |
| DICA\_NM | 4 | 3 | 25/15 | -20°C | 30 | 44 |  | PECO | 2 | 6 | 25/15 | -20°C | 20 | 30 |
| DICA\_NM | 4 | 3 | 25/15 | 15°C | 30 | 44 |  | PECO | 2 | 6 | 25/15 | 15°C | 20 | 30 |
| DICA\_NM | 4 | 6 | 20/10 | -20°C | 11 | 44 |  | PECO | 2 | 9 | 20/10 | -20°C | 15 | 30 |
| DICA\_NM | 4 | 6 | 20/10 | 15°C | 11 | 44 |  | PECO | 2 | 9 | 20/10 | 15°C | 16 | 30 |
| DICA\_NM | 4 | 6 | 25/15 | -20°C | 11 | 44 |  | PECO | 2 | 9 | 25/15 | -20°C | 16 | 30 |
| DICA\_NM | 4 | 6 | 25/15 | 15°C | 11 | 44 |  | PECO | 2 | 9 | 25/15 | 15°C | 16 | 30 |
| DICA\_NM | 4 | 9 | 20/10 | -20°C | 1 | 44 |  | PECO | 4 | 3 | 20/10 | -20°C | 31 | 44 |
| DICA\_NM | 4 | 9 | 20/10 | 15°C | 1 | 44 |  | PECO | 4 | 3 | 20/10 | 15°C | 32 | 44 |
| DICA\_NM | 4 | 9 | 25/15 | -20°C | 1 | 44 |  | PECO | 4 | 3 | 25/15 | -20°C | 31 | 44 |
| DICA\_NM | 4 | 9 | 25/15 | 15°C | 1 | 44 |  | PECO | 4 | 3 | 25/15 | 15°C | 32 | 44 |
| DICA\_NM | 6 | 3 | 20/10 | -20°C | 41 | 58 |  | PECO | 4 | 6 | 20/10 | -20°C | 30 | 44 |
| DICA\_NM | 6 | 3 | 20/10 | 15°C | 2 | 58 |  | PECO | 4 | 6 | 20/10 | 15°C | 33 | 44 |
| DICA\_NM | 6 | 3 | 25/15 | -20°C | 26 | 58 |  | PECO | 4 | 6 | 25/15 | -20°C | 31 | 44 |
| DICA\_NM | 6 | 3 | 25/15 | 15°C | 2 | 58 |  | PECO | 4 | 6 | 25/15 | 15°C | 31 | 44 |
| DICA\_NM | 6 | 9 | 20/10 | -20°C | 2 | 58 |  | PECO | 4 | 9 | 20/10 | -20°C | 10 | 44 |
| DICA\_NM | 6 | 9 | 20/10 | 15°C | 2 | 58 |  | PECO | 4 | 9 | 20/10 | 15°C | 15 | 44 |
| DICA\_NM | 6 | 9 | 25/15 | -20°C | 2 | 58 |  | PECO | 4 | 9 | 25/15 | -20°C | 10 | 44 |
| DICA\_NM | 6 | 9 | 25/15 | 15°C | 2 | 58 |  | PECO | 4 | 9 | 25/15 | 15°C | 20 | 44 |
| DICA\_NM | 8 | 3 | 20/10 | -20°C | 32 | 72 |  | PECO | 6 | 3 | 20/10 | -20°C | 44 | 58 |
| DICA\_NM | 8 | 3 | 20/10 | 15°C | 42 | 72 |  | PECO | 6 | 3 | 20/10 | 15°C | 43 | 58 |
| DICA\_NM | 8 | 3 | 25/15 | -20°C | 33 | 72 |  | PECO | 6 | 3 | 25/15 | -20°C | 45 | 58 |
| DICA\_NM | 8 | 3 | 25/15 | 15°C | 33 | 72 |  | PECO | 6 | 3 | 25/15 | 15°C | 44 | 58 |
| DICA\_NM | 10 | 3 | 20/10 | -20°C | 32 | 86 |  | PECO | 6 | 9 | 20/10 | -20°C | 17 | 58 |
| DICA\_NM | 10 | 3 | 20/10 | 15°C | 36 | 86 |  | PECO | 6 | 9 | 20/10 | 15°C | 7 | 58 |
| DICA\_NM | 10 | 3 | 25/15 | -20°C | 18 | 86 |  | PECO | 6 | 9 | 25/15 | -20°C | 15 | 58 |
| DICA\_NM | 10 | 3 | 25/15 | 15°C | 38 | 86 |  | PECO | 6 | 9 | 25/15 | 15°C | 9 | 58 |
| DICA\_UT | 0 | NS | 20/10 | -20°C | 5 | 16 |  | PECO | 8 | 3 | 20/10 | -20°C | 45 | 72 |
| DICA\_UT | 0 | NS | 20/10 | 15°C | 5 | 16 |  | PECO | 8 | 3 | 20/10 | 15°C | 53 | 72 |
| DICA\_UT | 0 | NS | 25/15 | -20°C | 4 | 16 |  | PECO | 8 | 3 | 25/15 | -20°C | 43 | 72 |
| DICA\_UT | 0 | NS | 25/15 | 15°C | 4 | 16 |  | PECO | 8 | 3 | 25/15 | 15°C | 58 | 72 |
| DICA\_UT | 2 | 3 | 20/10 | -20°C | 18 | 30 |  | PECO | 10 | 3 | 20/10 | -20°C | 52 | 86 |
| DICA\_UT | 2 | 3 | 20/10 | 15°C | 17 | 30 |  | PECO | 10 | 3 | 20/10 | 15°C | 54 | 86 |
| DICA\_UT | 2 | 3 | 25/15 | -20°C | 16 | 30 |  | PECO | 10 | 3 | 25/15 | -20°C | 54 | 86 |
| DICA\_UT | 2 | 3 | 25/15 | 15°C | 16 | 30 |  | PECO | 10 | 3 | 25/15 | 15°C | 59 | 86 |
| DICA\_UT | 2 | 6 | 20/10 | -20°C | 16 | 30 |  | PLPA\_AZ | 0 | NS | 20/10 | -20°C | 8 | 16 |
| DICA\_UT | 2 | 6 | 20/10 | 15°C | 7 | 30 |  | PLPA\_AZ | 0 | NS | 20/10 | 15°C | 7 | 16 |
| DICA\_UT | 2 | 6 | 25/15 | -20°C | 16 | 30 |  | PLPA\_AZ | 0 | NS | 25/15 | -20°C | 5 | 16 |
| DICA\_UT | 2 | 6 | 25/15 | 15°C | 2 | 30 |  | PLPA\_AZ | 0 | NS | 25/15 | 15°C | 4 | 16 |
| DICA\_UT | 2 | 9 | 20/10 | -20°C | 3 | 30 |  | PLPA\_AZ | 2 | 3 | 20/10 | -20°C | 20 | 30 |
| DICA\_UT | 2 | 9 | 20/10 | 15°C | 7 | 30 |  | PLPA\_AZ | 2 | 3 | 20/10 | 15°C | 20 | 30 |
| DICA\_UT | 2 | 9 | 25/15 | -20°C | 3 | 30 |  | PLPA\_AZ | 2 | 3 | 25/15 | -20°C | 16 | 30 |
| DICA\_UT | 2 | 9 | 25/15 | 15°C | 3 | 30 |  | PLPA\_AZ | 2 | 3 | 25/15 | 15°C | 17 | 30 |
| DICA\_UT | 4 | 3 | 20/10 | -20°C | 31 | 44 |  | PLPA\_AZ | 2 | 6 | 20/10 | -20°C | 23 | 30 |
| DICA\_UT | 4 | 3 | 20/10 | 15°C | 31 | 44 |  | PLPA\_AZ | 2 | 6 | 20/10 | 15°C | 13 | 30 |
| DICA\_UT | 4 | 3 | 25/15 | -20°C | 30 | 44 |  | PLPA\_AZ | 2 | 6 | 25/15 | -20°C | 20 | 30 |
| DICA\_UT | 4 | 3 | 25/15 | 15°C | 30 | 44 |  | PLPA\_AZ | 2 | 6 | 25/15 | 15°C | 8 | 30 |
| DICA\_UT | 4 | 6 | 20/10 | -20°C | 22 | 44 |  | PLPA\_AZ | 2 | 9 | 20/10 | -20°C | 19 | 30 |
| DICA\_UT | 4 | 6 | 20/10 | 15°C | 30 | 44 |  | PLPA\_AZ | 2 | 9 | 20/10 | 15°C | 21 | 30 |
| DICA\_UT | 4 | 6 | 25/15 | -20°C | 31 | 44 |  | PLPA\_AZ | 2 | 9 | 25/15 | -20°C | 17 | 30 |
| DICA\_UT | 4 | 6 | 25/15 | 15°C | 27 | 44 |  | PLPA\_AZ | 2 | 9 | 25/15 | 15°C | 18 | 30 |
| DICA\_UT | 4 | 9 | 20/10 | -20°C | 1 | 44 |  | PLPA\_AZ | 4 | 3 | 20/10 | -20°C | 32 | 44 |
| DICA\_UT | 4 | 9 | 20/10 | 15°C | 1 | 44 |  | PLPA\_AZ | 4 | 3 | 20/10 | 15°C | 33 | 44 |
| DICA\_UT | 4 | 9 | 25/15 | -20°C | 1 | 44 |  | PLPA\_AZ | 4 | 3 | 25/15 | -20°C | 32 | 44 |
| DICA\_UT | 4 | 9 | 25/15 | 15°C | 1 | 44 |  | PLPA\_AZ | 4 | 3 | 25/15 | 15°C | 30 | 44 |
| DICA\_UT | 6 | 3 | 20/10 | -20°C | 45 | 58 |  | PLPA\_AZ | 4 | 6 | 20/10 | -20°C | 40 | 44 |
| DICA\_UT | 6 | 3 | 20/10 | 15°C | 20 | 58 |  | PLPA\_AZ | 4 | 6 | 20/10 | 15°C | 39 | 44 |
| DICA\_UT | 6 | 3 | 25/15 | -20°C | 44 | 58 |  | PLPA\_AZ | 4 | 6 | 25/15 | -20°C | 35 | 44 |
| DICA\_UT | 6 | 3 | 25/15 | 15°C | 2 | 58 |  | PLPA\_AZ | 4 | 6 | 25/15 | 15°C | 36 | 44 |
| DICA\_UT | 6 | 9 | 20/10 | -20°C | 2 | 58 |  | PLPA\_AZ | 4 | 9 | 20/10 | -20°C | 7 | 44 |
| DICA\_UT | 6 | 9 | 20/10 | 15°C | 2 | 58 |  | PLPA\_AZ | 4 | 9 | 20/10 | 15°C | 39 | 44 |
| DICA\_UT | 6 | 9 | 25/15 | -20°C | 2 | 58 |  | PLPA\_AZ | 4 | 9 | 25/15 | -20°C | 35 | 44 |
| DICA\_UT | 6 | 9 | 25/15 | 15°C | 2 | 58 |  | PLPA\_AZ | 4 | 9 | 25/15 | 15°C | 33 | 44 |
| DICA\_UT | 8 | 3 | 20/10 | -20°C | 59 | 72 |  | PLPA\_AZ | 6 | 3 | 20/10 | -20°C | 47 | 58 |
| DICA\_UT | 8 | 3 | 20/10 | 15°C | 58 | 72 |  | PLPA\_AZ | 6 | 3 | 20/10 | 15°C | 31 | 58 |
| DICA\_UT | 8 | 3 | 25/15 | -20°C | 54 | 72 |  | PLPA\_AZ | 6 | 3 | 25/15 | -20°C | 45 | 58 |
| DICA\_UT | 8 | 3 | 25/15 | 15°C | 58 | 72 |  | PLPA\_AZ | 6 | 3 | 25/15 | 15°C | 45 | 58 |
| DICA\_UT | 10 | 3 | 20/10 | -20°C | 73 | 86 |  | PLPA\_AZ | 6 | 9 | 20/10 | -20°C | 5 | 58 |
| DICA\_UT | 10 | 3 | 20/10 | 15°C | 68 | 86 |  | PLPA\_AZ | 6 | 9 | 20/10 | 15°C | 2 | 58 |
| DICA\_UT | 10 | 3 | 25/15 | -20°C | 72 | 86 |  | PLPA\_AZ | 6 | 9 | 25/15 | -20°C | 39 | 58 |
| DICA\_UT | 10 | 3 | 25/15 | 15°C | 72 | 86 |  | PLPA\_AZ | 6 | 9 | 25/15 | 15°C | 2 | 58 |
| HEMU | 0 | NS | 20/10 | -20°C | 8 | 16 |  | PLPA\_AZ | 8 | 3 | 20/10 | -20°C | 63 | 72 |
| HEMU | 0 | NS | 20/10 | 15°C | 5 | 16 |  | PLPA\_AZ | 8 | 3 | 20/10 | 15°C | 62 | 72 |
| HEMU | 0 | NS | 25/15 | -20°C | 6 | 16 |  | PLPA\_AZ | 8 | 3 | 25/15 | -20°C | 60 | 72 |
| HEMU | 0 | NS | 25/15 | 15°C | 3 | 16 |  | PLPA\_AZ | 8 | 3 | 25/15 | 15°C | 60 | 72 |
| HEMU | 2 | 3 | 20/10 | -20°C | 15 | 30 |  | PLPA\_AZ | 10 | 3 | 20/10 | -20°C | 76 | 86 |
| HEMU | 2 | 3 | 20/10 | 15°C | 16 | 30 |  | PLPA\_AZ | 10 | 3 | 20/10 | 15°C | 79 | 86 |
| HEMU | 2 | 3 | 25/15 | -20°C | 16 | 30 |  | PLPA\_AZ | 10 | 3 | 25/15 | -20°C | 75 | 86 |
| HEMU | 2 | 3 | 25/15 | 15°C | 16 | 30 |  | PLPA\_AZ | 10 | 3 | 25/15 | 15°C | 77 | 86 |
| HEMU | 2 | 6 | 20/10 | -20°C | 15 | 30 |  | PLPA\_UT | 0 | NS | 20/10 | -20°C | 6 | 16 |
| HEMU | 2 | 6 | 20/10 | 15°C | 18 | 30 |  | PLPA\_UT | 0 | NS | 20/10 | 15°C | 6 | 16 |
| HEMU | 2 | 6 | 25/15 | -20°C | 7 | 30 |  | PLPA\_UT | 0 | NS | 25/15 | -20°C | 7 | 16 |
| HEMU | 2 | 6 | 25/15 | 15°C | 17 | 30 |  | PLPA\_UT | 0 | NS | 25/15 | 15°C | 9 | 16 |
| HEMU | 2 | 9 | 20/10 | -20°C | 22 | 30 |  | PLPA\_UT | 2 | 3 | 20/10 | -20°C | 18 | 30 |
| HEMU | 2 | 9 | 20/10 | 15°C | 17 | 30 |  | PLPA\_UT | 2 | 3 | 20/10 | 15°C | 18 | 30 |
| HEMU | 2 | 9 | 25/15 | -20°C | 5 | 30 |  | PLPA\_UT | 2 | 3 | 25/15 | -20°C | 17 | 30 |
| HEMU | 2 | 9 | 25/15 | 15°C | 5 | 30 |  | PLPA\_UT | 2 | 3 | 25/15 | 15°C | 18 | 30 |
| HEMU | 4 | 3 | 20/10 | -20°C | 24 | 44 |  | PLPA\_UT | 2 | 6 | 20/10 | 15°C | 22 | 30 |
| HEMU | 4 | 3 | 20/10 | 15°C | 30 | 44 |  | PLPA\_UT | 2 | 6 | 25/15 | 15°C | 24 | 30 |
| HEMU | 4 | 3 | 25/15 | -20°C | 30 | 44 |  | PLPA\_UT | 4 | 3 | 20/10 | -20°C | 32 | 44 |
| HEMU | 4 | 3 | 25/15 | 15°C | 30 | 44 |  | PLPA\_UT | 4 | 3 | 20/10 | 15°C | 31 | 44 |
| HEMU | 4 | 6 | 20/10 | -20°C | 30 | 44 |  | PLPA\_UT | 4 | 3 | 25/15 | -20°C | 30 | 44 |
| HEMU | 4 | 6 | 20/10 | 15°C | 26 | 44 |  | PLPA\_UT | 4 | 3 | 25/15 | 15°C | 30 | 44 |
| HEMU | 4 | 6 | 25/15 | -20°C | 27 | 44 |  | PLPA\_UT | 6 | 3 | 20/10 | -20°C | 46 | 58 |
| HEMU | 4 | 6 | 25/15 | 15°C | 10 | 44 |  | PLPA\_UT | 6 | 3 | 20/10 | 15°C | 46 | 58 |
| HEMU | 4 | 9 | 20/10 | -20°C | 1 | 44 |  | PLPA\_UT | 6 | 3 | 25/15 | -20°C | 44 | 58 |
| HEMU | 4 | 9 | 20/10 | 15°C | 17 | 44 |  | PLPA\_UT | 6 | 3 | 25/15 | 15°C | 46 | 58 |
| HEMU | 4 | 9 | 25/15 | -20°C | 10 | 44 |  | PLPA\_UT | 8 | 3 | 20/10 | -20°C | 49 | 72 |
| HEMU | 4 | 9 | 25/15 | 15°C | 1 | 44 |  | PLPA\_UT | 8 | 3 | 20/10 | 15°C | 58 | 72 |
| HEMU | 6 | 3 | 20/10 | -20°C | 43 | 58 |  | PLPA\_UT | 8 | 3 | 25/15 | -20°C | 59 | 72 |
| HEMU | 6 | 3 | 20/10 | 15°C | 30 | 58 |  | PLPA\_UT | 8 | 3 | 25/15 | 15°C | 59 | 72 |
| HEMU | 6 | 3 | 25/15 | -20°C | 34 | 58 |  | PLPA\_UT | 10 | 3 | 20/10 | -20°C | 74 | 86 |
| HEMU | 6 | 3 | 25/15 | 15°C | 38 | 58 |  | PLPA\_UT | 10 | 3 | 20/10 | 15°C | 74 | 86 |
| HEMU | 6 | 9 | 20/10 | -20°C | 35 | 58 |  | PLPA\_UT | 10 | 3 | 25/15 | -20°C | 69 | 86 |
| HEMU | 6 | 9 | 20/10 | 15°C | 36 | 58 |  | PLPA\_UT | 10 | 3 | 25/15 | 15°C | 67 | 86 |
| HEMU | 6 | 9 | 25/15 | -20°C | 30 | 58 |  | SPPA | 0 | NS | 20/10 | -20°C | 6 | 16 |
| HEMU | 6 | 9 | 25/15 | 15°C | 6 | 58 |  | SPPA | 0 | NS | 20/10 | 15°C | 8 | 16 |
| HEMU | 8 | 3 | 20/10 | -20°C | 41 | 72 |  | SPPA | 0 | NS | 25/15 | -20°C | 6 | 16 |
| HEMU | 8 | 3 | 20/10 | 15°C | 43 | 72 |  | SPPA | 0 | NS | 25/15 | 15°C | 5 | 16 |
| HEMU | 8 | 3 | 25/15 | -20°C | 48 | 72 |  | SPPA | 2 | 3 | 20/10 | -20°C | 19 | 30 |
| HEMU | 8 | 3 | 25/15 | 15°C | 54 | 72 |  | SPPA | 2 | 3 | 20/10 | 15°C | 18 | 30 |
| HEMU | 10 | 3 | 20/10 | -20°C | 53 | 86 |  | SPPA | 2 | 3 | 25/15 | -20°C | 18 | 30 |
| HEMU | 10 | 3 | 20/10 | 15°C | 28 | 86 |  | SPPA | 2 | 3 | 25/15 | 15°C | 17 | 30 |
| HEMU | 10 | 3 | 25/15 | -20°C | 50 | 86 |  | SPPA | 2 | 6 | 20/10 | -20°C | 17 | 30 |
| HEMU | 10 | 3 | 25/15 | 15°C | 54 | 86 |  | SPPA | 2 | 6 | 20/10 | 15°C | 13 | 30 |
| PAMU | 0 | NS | 20/10 | -20°C | 9 | 16 |  | SPPA | 2 | 6 | 25/15 | -20°C | 20 | 30 |
| PAMU | 0 | NS | 20/10 | 15°C | 9 | 16 |  | SPPA | 2 | 6 | 25/15 | 15°C | 18 | 30 |
| PAMU | 0 | NS | 25/15 | -20°C | 10 | 16 |  | SPPA | 2 | 9 | 20/10 | -20°C | 17 | 30 |
| PAMU | 0 | NS | 25/15 | 15°C | 7 | 16 |  | SPPA | 2 | 9 | 20/10 | 15°C | 17 | 30 |
| PAMU | 2 | 3 | 20/10 | -20°C | 22 | 30 |  | SPPA | 2 | 9 | 25/15 | -20°C | 16 | 30 |
| PAMU | 2 | 3 | 20/10 | 15°C | 19 | 30 |  | SPPA | 2 | 9 | 25/15 | 15°C | 16 | 30 |
| PAMU | 2 | 3 | 25/15 | -20°C | 18 | 30 |  | SPPA | 4 | 3 | 20/10 | -20°C | 30 | 44 |
| PAMU | 2 | 3 | 25/15 | 15°C | 21 | 30 |  | SPPA | 4 | 3 | 20/10 | 15°C | 31 | 44 |
| PAMU | 2 | 6 | 20/10 | -20°C | 19 | 30 |  | SPPA | 4 | 3 | 25/15 | -20°C | 30 | 44 |
| PAMU | 2 | 6 | 20/10 | 15°C | 16 | 30 |  | SPPA | 4 | 3 | 25/15 | 15°C | 31 | 44 |
| PAMU | 2 | 6 | 25/15 | -20°C | 20 | 30 |  | SPPA | 4 | 6 | 20/10 | -20°C | 31 | 44 |
| PAMU | 2 | 6 | 25/15 | 15°C | 18 | 30 |  | SPPA | 4 | 6 | 20/10 | 15°C | 31 | 44 |
| PAMU | 2 | 9 | 20/10 | -20°C | 13 | 30 |  | SPPA | 4 | 6 | 25/15 | -20°C | 31 | 44 |
| PAMU | 2 | 9 | 20/10 | 15°C | 13 | 30 |  | SPPA | 4 | 6 | 25/15 | 15°C | 31 | 44 |
| PAMU | 2 | 9 | 25/15 | -20°C | 16 | 30 |  | SPPA | 4 | 9 | 20/10 | -20°C | 22 | 44 |
| PAMU | 2 | 9 | 25/15 | 15°C | 13 | 30 |  | SPPA | 4 | 9 | 20/10 | 15°C | 10 | 44 |
| PAMU | 4 | 3 | 20/10 | -20°C | 31 | 44 |  | SPPA | 4 | 9 | 25/15 | -20°C | 18 | 44 |
| PAMU | 4 | 3 | 20/10 | 15°C | 33 | 44 |  | SPPA | 4 | 9 | 25/15 | 15°C | 30 | 44 |
| PAMU | 4 | 3 | 25/15 | -20°C | 31 | 44 |  | SPPA | 6 | 3 | 20/10 | -20°C | 39 | 58 |
| PAMU | 4 | 3 | 25/15 | 15°C | 31 | 44 |  | SPPA | 6 | 3 | 20/10 | 15°C | 45 | 58 |
| PAMU | 4 | 6 | 20/10 | -20°C | 25 | 44 |  | SPPA | 6 | 3 | 25/15 | -20°C | 38 | 58 |
| PAMU | 4 | 6 | 20/10 | 15°C | 21 | 44 |  | SPPA | 6 | 3 | 25/15 | 15°C | 44 | 58 |
| PAMU | 4 | 6 | 25/15 | -20°C | 25 | 44 |  | SPPA | 6 | 9 | 20/10 | -20°C | 24 | 58 |
| PAMU | 4 | 6 | 25/15 | 15°C | 28 | 44 |  | SPPA | 6 | 9 | 20/10 | 15°C | 2 | 58 |
| PAMU | 4 | 9 | 20/10 | -20°C | 10 | 44 |  | SPPA | 6 | 9 | 25/15 | -20°C | 30 | 58 |
| PAMU | 4 | 9 | 20/10 | 15°C | 10 | 44 |  | SPPA | 6 | 9 | 25/15 | 15°C | 13 | 58 |
| PAMU | 4 | 9 | 25/15 | -20°C | 10 | 44 |  | SPPA | 8 | 3 | 20/10 | -20°C | 58 | 72 |
| PAMU | 4 | 9 | 25/15 | 15°C | 9 | 44 |  | SPPA | 8 | 3 | 20/10 | 15°C | 59 | 72 |
| PAMU | 6 | 3 | 20/10 | -20°C | 45 | 58 |  | SPPA | 8 | 3 | 25/15 | -20°C | 58 | 72 |
| PAMU | 6 | 3 | 20/10 | 15°C | 37 | 58 |  | SPPA | 8 | 3 | 25/15 | 15°C | 58 | 72 |
| PAMU | 6 | 3 | 25/15 | -20°C | 44 | 58 |  | SPPA | 10 | 3 | 20/10 | -20°C | 69 | 86 |
| PAMU | 6 | 3 | 25/15 | 15°C | 40 | 58 |  | SPPA | 10 | 3 | 20/10 | 15°C | 66 | 86 |
| PAMU | 6 | 9 | 20/10 | -20°C | 13 | 58 |  | SPPA | 10 | 3 | 25/15 | -20°C | 72 | 86 |
| PAMU | 6 | 9 | 20/10 | 15°C | 12 | 58 |  | SPPA | 10 | 3 | 25/15 | 15°C | 68 | 86 |
| PAMU | 6 | 9 | 25/15 | -20°C | 12 | 58 |  |  |  |  |  |  |  |  |
| PAMU | 6 | 9 | 25/15 | 15°C | 12 | 58 |  |  |  |  |  |  |  |  |