**Table S3** Significant correlation (*rs*) between the root collar diameter (*RCD*, mm), height (*H*, cm), robustness index (*HRCD*, cm/mm2) of seedlings before planting in 2018 and *RCD3*, *H3* and the survival rate (*SR*) of the same seedlings 44 months after planting in the field trials, for each pine pure species (-P) and their hybrids (-H)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group** | ***Var*** | ***rs*[*Var* vs *RCD3*] (*CI95%*)** | ***rs*[*Var* vs *H3*] (*CI95%*)** | ***rs*[*Var* vs *SR*] (*CI95%*)** |
| **PL-P** | *RCD* | 0.79\*\*(0.64 - 1.0) | 0.49\*(0.19 - 1.0) | -0.16 |
| **PL-H** | *RCD* | 0.51\*(0.17 - 0.95) | 0.17 | 0.14 |
| **PT-H** | *RCD* | 0.23\*\*(0.08 - 0.38) | 0.13 | -0.11 |
| **PE-H** | *RCD* | 0.22\*\*\*(0.10 - 0.33) | 0.10 | 0.02 |
| **PE-P** | *RCD* | 0.20\*\*\*(0.09 - 0.32) | 0.08 | 0.08 |
| **PT-P** | *RCD* | 0.15 | 0.01 | -0.21\*(-0.35 - -0.09) |
| **all** | *RCD* | 0.29\*\*\*(0.23- 0.37) |  | -0.02 |
| **PL-H** | *H* | 0.40\*\*(0.15 - 0.80) | 0.65\*\*\*(0.44 - 1.0) | 0.40\*\*(0.20 - 0.64) |
| **PE-H** | *H* | -0.11 | 0.29\*\*\*(0.17 - 0.41) | 0.04 |
| **PE-P** | *H* | 0.02 | 0.24\*\*\*(0.12 - 0.36) | 0.03 |
| **PD-H** | *H* | 0.27 | 0.20 | 0.24\*(0.08 - 0.40) |
| **PT-H** | *H* | -0.12 | 0.08 | 0.21\*\*\*(0.09 - 0.32) |
| **PT-P** | *H* | -0.10 | 0.17 | 0.20\*\*(0.07- 0.32) |
| **all** | *H* |  | 0.40\*\*\*(0.34 - 0.46) | 0.10\*\*\*(0.04- 0.14) |
| **PT-H** | *HRCD* | -0.24\*\*(-0.40 - -0.09) | -0.01 | 0.19\*(0.08 - 0.29) |
| **PE-H** | *HRCD* | -0.22\*\*\*(-0.34- - 0.12) | 0.03 | 0.09 |
| **PE-P** | *HRCD* | -0.18\*\*(-0.30 - -0.07) | 0.09 | -0.05 |
| **PT-P** | *HRCD* | -0.16 | 0.04 | 0.26\*\*(0.14 - 0.41) |
| **all** | *HRCD* |  |  | 0.06\*\*(0.02 - 0.12) |

Note: var = variable, *CI95%* = 95% confidence interval by 1,000,000 bootstrap iterations and subsamples size of 50 seedlings, *RCD3* = root collar diameter (mm) 44 months after planting in the field trials, *H3* = height (cm) after 44 months of planting in the trials; PA‐P = *Pinus arizonica* pure species, PD‐P = *P. durangensis* pure species, PE‐P = *P. engelmannii* pure species, PL‐P = *P. leiophylla* pure speciesand PT‐P = *P. teocote* pure species; PA‐H = hybrids of *Pinus arizonica* × *P. durangensis* genetically more similar to *P. arizonica*; PD‐H = hybrids of *P*. *durangensis* × *P*. *arizonica* genetically more similar to *P*. *durangensis* and *P. durangensis* × *P. engelmannii* genetically more similar to *P. durangensis*; PE‐H = hybrids of *P. engelmannii* × *P. arizonica* genetically more similar to *P*. *engelmannii*; PL‐H = hybrids of *P. leiophylla* × *P. teocote* genetically more similar to *P. leiophylla*; PT‐H = *P*. *leiophylla* × *P. teocote* genetically more similar to *P. teocote;* all = across all species and their hybrids (see more in Hernández-Velasco et al. 2021; Sanchez-Hernandez et al. 2022).