

**Table S11.** The observation numbers of seed- and seedling traits of *X. sorbifolium* (4 replicates).

| Provenance | H     | D    | N    | P    | K    | Ca   | Mg   | Cu   | Zn    | Fe     | Mn   | RB   | SB   | TB   | R/S  | H/D   |
|------------|-------|------|------|------|------|------|------|------|-------|--------|------|------|------|------|------|-------|
| AB         | 20.97 | 2.34 | 2.10 | 0.17 | 0.84 | 0.17 | 0.22 | 7.36 | 21.39 | 80.30  | 2.48 | 2.24 | 0.37 | 2.61 | 6.14 | 8.95  |
| AB         | 22.23 | 2.67 | 2.36 | 0.25 | 0.86 | 0.17 | 0.23 | 8.74 | 19.73 | 93.00  | 3.74 | 2.33 | 0.36 | 2.70 | 6.43 | 8.32  |
| AB         | 22.47 | 2.78 | 2.10 | 0.17 | 0.83 | 0.19 | 0.22 | 9.03 | 22.03 | 110.00 | 3.81 | 1.81 | 0.39 | 2.20 | 4.61 | 8.10  |
| AB         | 18.93 | 2.35 | 2.36 | 0.22 | 0.84 | 0.18 | 0.22 | 8.23 | 20.48 | 112.00 | 3.15 | 1.94 | 0.35 | 2.29 | 5.58 | 8.04  |
| OB         | 22.08 | 3.63 | 2.36 | 0.16 | 0.85 | 0.19 | 0.21 | 7.28 | 20.89 | 93.10  | 2.95 | 2.00 | 0.48 | 2.49 | 4.15 | 6.08  |
| OB         | 17.07 | 3.16 | 2.10 | 0.15 | 0.85 | 0.17 | 0.21 | 10.6 | 26.16 | 117.00 | 4.80 | 2.27 | 0.35 | 2.62 | 6.50 | 5.40  |
| OB         | 25.04 | 3.60 | 2.36 | 0.23 | 0.84 | 0.18 | 0.21 | 7.72 | 21.25 | 100.00 | 2.85 | 2.59 | 0.55 | 3.14 | 4.68 | 6.95  |
| OB         | 16.56 | 2.95 | 2.63 | 0.16 | 0.84 | 0.18 | 0.21 | 8.09 | 21.62 | 89.90  | 2.95 | 1.64 | 0.37 | 2.01 | 4.43 | 5.61  |
| SX         | 20.65 | 2.74 | 2.10 | 0.17 | 0.83 | 0.18 | 0.22 | 7.57 | 20.01 | 98.10  | 4.40 | 3.24 | 0.54 | 3.78 | 6.04 | 7.54  |
| SX         | 23.72 | 2.40 | 2.36 | 0.17 | 0.85 | 0.19 | 0.22 | 7.36 | 23.02 | 92.40  | 4.77 | 3.28 | 0.63 | 3.91 | 5.21 | 9.90  |
| SX         | 24.06 | 2.65 | 2.63 | 0.13 | 0.85 | 0.18 | 0.21 | 6.99 | 20.15 | 79.60  | 2.62 | 3.59 | 0.59 | 4.18 | 6.14 | 9.08  |
| SX         | 23.46 | 2.38 | 2.63 | 0.15 | 0.85 | 0.19 | 0.22 | 7.14 | 21.62 | 88.70  | 4.04 | 2.81 | 0.59 | 3.40 | 4.74 | 9.84  |
| ML         | 23.35 | 2.13 | 2.36 | 0.17 | 0.84 | 0.18 | 0.23 | 4.95 | 15.77 | 83.10  | 3.34 | 2.36 | 0.58 | 2.94 | 4.06 | 10.95 |
| ML         | 22.64 | 2.82 | 2.36 | 0.14 | 0.84 | 0.19 | 0.22 | 6.41 | 18.92 | 89.70  | 3.84 | 2.36 | 1.24 | 3.60 | 1.90 | 8.03  |
| ML         | 21.14 | 2.72 | 2.10 | 0.30 | 0.86 | 0.14 | 0.22 | 6.92 | 21.32 | 86.60  | 3.61 | 2.31 | 0.49 | 2.80 | 4.75 | 7.76  |
| ML         | 21.59 | 2.44 | 1.84 | 0.29 | 0.87 | 0.14 | 0.22 | 7.36 | 18.20 | 82.40  | 3.48 | 1.76 | 0.48 | 2.25 | 3.64 | 8.84  |

AB-Ar Horqin Banner; OB-Ongniud Banner; SX-Shanxian; ML-Mulei; H-height; D-diameter; RB-root biomass; SB-stem biomass; TB-total biomass; R/S-root-stem biomass ratio; H/D-height-diameter ratio.