**Table S5**. Symbiotic responses of *Glycine soja* accessions from Korea, Japan, Russia, and China to inoculation with *S. fredii* HH103-RifR.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Accession** | **Number of nodules** | **Dry weight of nodules (mg)** | **Shoot dry-weight (mg) of plants**  | **REI** **(%)** |
| **Inoculated**  | **Uninoculated**  | **N-fertilized** |
| **Wild-soybean accessions from Korea**  |
| K1 | 14.7±5.0 b | 18.0±2.6 c | 121±16 d | 112±7 d | 4780±125 c | 0.2 |
| K2 | 74.0±16.9 a | 51.0±4.2 a | 195±33 d | 121±21 d | 5293±292 c | 1.4 |
| K3 | 16.3±4.1 b | 33.0±3.1 b | 246±13 d | 184±22 d | 6430±300 b | 1.2 |
| K4 | 11.7±1.5 b | 28.0±1.2 bc | 357±20 d | 106±12 d | 6520±110 b | 3.9 |
| K5 | 46.0±2.0 a | 63.5±8.5 a | 341±44 d | 306±45 d | 7680±662 a | 0.5 |
| LSD(p<0.05) | 27.4 | 11.6 | 581 |  |
| **Wild-soybean accessions from Japan** |
| J1 | 46.3±18.8 a | 31.3±9.3 a | 219±46 c | 187±52 c | 5630±358 a | 0.6 |
| J2 | 29.0±3.2 ab | 34.7±3.2 a | 226±33 c | 176±20 c | 5687±514 a | 0.9 |
| J3 | 23.7±4.2 ab | 37.7±2.0 a | 205±29 c | 164±22 c | 5610±341 a | 0.8 |
| J4 | 22.3±1.9 ab | 35.0±2.5 a | 248±22 c | 162±16 c | 6053±69 a | 1.5 |
| J5 | 15.3±2.7 ab | 10.7±2.2 b | 94±10 c | 137±10 c | 4713±269 b | 0.0 |
| LSD(p<0.05) | 27.9 | 14.9 | 575 |  |
| **Wild-soybean accessions from Russia** |
| R1 | 15.3±3.2 ab | 28.0±6.1 ab | 177±43 c | 73±7 c | 4953±487 a | 2.1 |
| R2 | 12.7±2.2 ab | 36.7±1.3 a | 254±6 c | 95±7 c | 5530±725 a | 2.9 |
| R3 | 8.3±2.3 bc | 11.3±4.3 c | 140±20 c | 118±7 c | 2967±276 b | 0.8 |
| R4 | 4.3±1.2 c | 16.3±2.6 bc | 200±3 c | 124±9 c | 3457±224 b | 2.3 |
| R5 | 16.3±3.2 a | 29.0±2.5 a | 258±50 c | 126±13 c | 4960±572 a | 2.7 |
| LSD(p<0.05) | 8.0 | 11.9 | 726 |  |
| **Wild- soybean accessions from China** |
| CH1 | 26.7±7.0 b | 45.7±8.7 b | 196±36 e | 105±13 e | 4490±487 ab | 2.1 |
| CH2 | 0.3±0.3 b | 0.3±0.3 c | 85±12 e | 93±8 e | 4227±166 b | 0.0 |
| CH3 | 17.0±4.0 b | 51.0±9.2 b | 338±43 e | 129±26 e | 4890±92 a | 4.4 |
| CH4 | 62.0±17.2 a | 167.3±23.3 a | 1970±257 d | 83±9 e | 3577±160 c | 54.0 |
| CH5 | 14.0±7.5 b | 26.3±6.1 bc | 328±34 e | 240±16 e | 4813±372 a | 1.9 |
| LSD(p<0.05) | 28.8 | 38.6 | 469 |

Numbers refer to mean values (±SE, n=3) of three Leonard jars, each containing two plants. Determinations were carried out 60 days after inoculation. For each parameter and accessions of the same country, data followed by the same letter are not significantly different at α = 5 %. n.s. = non-significant.

The Relative Efficiency Index (REI) for each inoculant/soybean-accession combination was calculated by comparisons among Plant-Top Dry-Weight (PTDW) of inoculated treatments (I), N-fertilized (N) and Untreated (U) controls. REI values were obtained by using the relation (I - U/ N- U) x 100.