**Table S1 Introgressed alien chromosome details of selected wheat-*Aegilops kotschyi* substitution lines**

|  |  |  |  |
| --- | --- | --- | --- |
| **Plant material** | **Pedigree** | **Introgressed chromosome** | **2n** |
| BC1F4 117-18-17-9 | CS (*PhI*)/*Ae. kotschyi*3790//UP2338-2R(117)-18 K-17R | Uk-W translocation | 42 |
| BC2F4 63-2-13-1 | CS(*PhI*)/*Ae.kotschyi* 3790//UP2338-2///WL711(63)-2-13-1-7 | 7Uk | 42 |
| BC1F4 77-33-2-5 | CS (*PhI*)/ *Ae. kotschyi* 3790//UP2338-2(77)-33-2-5-2 | 2Sk | 42 |

**Table S2 Fe and Zn content in per seed of different accessions of wild *Triticum Aegilops* species and wheat-*Aegilops kotschyi* substitution lines**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Plant material** | **Accession** | **Fe (µg/seed)** | **Zn (µg/seed)** |
| 1 | *T. aestivum* | *Chinese Spring* | 1.186 | 0.964 |
| 2 | *T. aestivum* | *PBW343* | 1.477 | 1.227 |
| 3 | *T. aestivum* | *UP2338* | 1.341 | 1.458 |
| 4 | *T. aestivum* | *UP2382* | 1.499 | 1.503 |
| 5 | *T. aestivum* | *WL711* | 1.208 | 1.226 |
| 6 | *T. monococcum L.* | W 463 | 1.106 | 1.181 |
| 7 | *T. monococcum L.* | 140877 | 1.077 | 1.190 |
| 8 | *T. monococcum L.* | W 473 | 0.900 | 0.899 |
| 9 | *T. dicoccoides L.* | 4821 | 1.108 | 1.600 |
| 10 | *T. dicoccoides L.* | TA 117 | 2.075 | 1.810 |
| 11 | *Ae. tauschii* | 14232 | 0.571 | 0.334 |
| 12 | *Ae. tauschii* | 14339 | 0.585 | 0.415 |
| 13 | *Ae. umbellulata* | EC663068 | 0.613 | 0.521 |
| 14 | *Ae. umbellulata* | EC663376 | 0.629 | 0.693 |
| 15 | *Ae. longissima* | 3507 | 0.742 | 0.800 |
| 16 | *Ae. speltoides* | 3804 | 0.337 | 0.548 |
| 17 | *Ae. kotschyi* | 3502 | 1.166 | 1.312 |
| 18 | *Ae. kotschyi* | 3774 | 1.045 | 0.957 |
| 19 | *Ae. peregrina* | 3477 | 1.158 | 0.901 |
| 20 | *Ae. peregrina* | 3791 | 0.921 | 0.980 |
| 21 | *Ae. peregrina* | 13772 | 1.348 | 0.879 |
| 22 | *BC 1 F 4 117-18-17-9* | - | 1.234 | 1.102 |
| 23 | *BC 2 F4 63-2-13-1* | - | 1.484 | 1.437 |
| 24 | *BC 1 F 4 77-33-2-5* | - | 1.272 | 1.193 |