

Supplementary Table S1. Wheat references included in the analysis.

| Species (n) ¹ | Cultivars included in the study ² |
|--------------------------|---|
| France | |
| <i>T. aestivum</i> (12) | 67510; Athos; Bayard 80240; Blé du Mesnil; Bocquiau; Cloches 32; Hybride à courte paille; Languedoc; Lignée 6696; Renfort; Rex; YGA Blondeau |
| <i>T. durum</i> (1) | Lez |
| <i>T. turgidum</i> (16) | Armet; Ixos; Lloyd; Néodur; No 6; Osiris; Pharaons; Senostris IV; Villemur; Géant du Milanais; col. Baillargues I; col. Baillargues II; col. Baillargues III; col. Lac Cécèles; col. Murviels les Montpellier; col. Vendargues |
| Italy | |
| <i>T. aestivum</i> (18) | 100/M Morgex; Attilio Fabrini; Clavel 2; Conte Marzotto; Falcone J.BO 220; Fortunato; Freccia; Generoso 7; Gentil Rosso 4; Impeto; Jacometti 49; Libellula; Nobel; Roma; S.15 Glutinoso; Salto (Tiriamodiritto); San Pastore; ST.774 Ibrido 440 |
| <i>T. spelta</i> (3) | No 1; col. 43.59°N 11.57°E; col. 44.69°N 10.03°E |
| <i>T. turgidum</i> (2) | Campania 22; Civitella 204 |
| Spain | |
| <i>T. aestivum</i> (7) | Aragon 03; Asturie H'3; Caspino 1; Ex Cabezorro; Montsec; Pane 247; Pane 3 |
| <i>T. spelta</i> (2) | AST 17C; AST 9B |
| <i>T. durum</i> (4) | Candéal; Lucena 45; No 9; Torcal |
| <i>T. turgidum</i> (5) | Asturie B3; Asturie B4; Asturie H'D; Asturie L2; Asturie L6 |

¹ Between brackets: number of samples

² Wheat samples that were collected during field collections are marked as "col." - Geographical coordinates (decimal degrees) or location name are given in such cases. *Triticum aestivum* and *T. spelta* and are collectively referred to as hexaploid wheat in the present study. *Triticum durum* and *T. turgidum* are referred to as tetraploid wheat.

