

Resistance to common bunt (*Tilletia tritici*) and rust (*Puccinia* sp.) in hulled wheat

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Abstract

Common bunt (*Tilletia tritici*) and rust diseases (*Puccinia* sp.) was scored in 123 varieties of wheat species other than bread wheat. The species included *Triticum spelta* (90 lines), *T.macha* (18 lines), *T.dicoccon* (6 lines), *T.timopheevii* (3 lines) and one representative of each of the species *T.vavilovii*, *T.karamyshevii*, *T. polonicum*, *T.carthlicum* and *T.compactum*. Huge differences in bunt susceptibility were found in all species. Lines with low susceptibility were identified in *Triticum spelta*, *T.macha*, *T.dicoccon*, *T.timopheevii* and *T.vavilovii* but none in the few investigated lines of species *T.karamyshevii*, *T. polonicum* and *T.carthlicum*. All lines of *T.macha*, *T.vavilovii* and *T.karamyshevii* were susceptible to rust, where as resistance to this disease was frequent in *T. spelta*. The study hereby has identified candidates for future plant breeding within these species. The lines were also screened for their ability to be sown as spring crops, which can be used as a strategy to control common bunt. Only few lines of *T.spelta* were of this intermediate type, whereas half of the lines of *T.macha*, *T.dicoccon*, *T.timopheevii* were.