

P.24 - Resistance of Polish common cultivars and advanced breeding lines of wheat and triticale to Fusarium head blight

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The resistance of winter wheat and winter triticale to *Fusarium* head blight (FHB) was evaluated. Plant material was comprised of: 36 common cultivars of winter wheat, 34 common cultivars of spring wheat, 12 common cultivars of winter triticale, 123 breeding lines of winter wheat and 88 breeding lines of winter triticale. Heads were inoculated in field experiments using DON-chemotype isolates of *Fusarium culmorum*. Resistance traits such as FHB index (combination of FHB incidence and severity scored 3-times), *Fusarium*-damaged kernels (FDK) and reductions of yield components (grain yield per head, TKW, specific kernel weight) were scored. Grain from selected accessions was analyzed for the presence of *Fusarium* mycotoxins: deoxynivalenol (DON), 3-AcDON, 15-AcDON, and zearalenone using HPLC method with UV detection. Wide variability of FHB resistance was observed in wheat (FHB index from 18.7 to 64.3%) and triticale (FHB index from 7.5 to 33.3%) cultivars and in wheat (FHB index from 19.0 to 61.7%) and triticale (FHB index from 5.5 to 33.3 %) lines. Most wheat accessions were more susceptible than resistance checks (SVP...10-1 FHB index = 10.9%, Arina FHB index = 19.0%). On average triticale accessions were more resistant than wheat ones (19.4 versus 39.7 %). Resistance of the most resistant triticale cultivars was similar to that of the winter wheat resistant checks. Average resistance of the wheat and triticale cultivars was similar to that of the breeding lines. Wheat and triticale cultivars accumulated large amounts of DON in grain. On average 22.0 ppm for wheat cultivars and 15.1 ppm for triticale. Under high disease pressure grain of the most susceptible cultivars may be contaminated with amounts of DON exceeding EU limits.