

# Species Diversity and Structure of the Dominant Complex of *Fusarium* Seed Infection of Wheat in the Central Chernozem Region of Russia

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**Abstract:** A series of studies conducted in 2002 – 2006 and 2010 – 2013 showed that *Fusarium* species diversity is represented by 18 species, 7 of which belong to the group of dominants, but the most important are 4 species of *Fusarium sporotrichioides*, *F. avenaceum*, *F. roae*, *F. culmorum*. The status of ecologically plastic fungi that are common in winter and spring wheat in the Central Chernozem region of Russia have *F. sporotrichioides* and *F. poae* (superdominant). *F. eguisei*, *F. oxysporum*, *F. proliferatum* are a minor group and reach values of the dominant once in 9 years.

The change in the ratio of species in the group of dominants was observed in ecologically contrasting years: in extremely dry years the share of *F. eguisei* grew, but in the wet years the share of *F. culmorum* grew (the Tambov region, 2010). The dominant complex in 2010 – 2013 was different from those in 2002 – 2006 and included *F. sporotrichioides*, *F. culmorum* and *F. poae*, the total share of which amounted to 74.8 %. In moderately and excessively wet years (2004 and 2012) the infection of seeds increased to 15 % and 20 %, respectively, while the proportion of *F. avenaceum* and *F. culmorum* amounted to 75 and 54.5 %, respectively. These species cause infestation of grain (*F. avenaceum*, *F. culmorum* and explicit), their field diagnosis is complicated, and their removal from seeds is almost impossible, which results in off-season transfer of seeds infestation.