

Table of Contents

In Press

Online First

Article Archive

- PPS (55) 2019
- PPS (54) 2018
- PPS (53) 2017
- PPS (52) 2016
- PPS (51) 2015
- PPS (50) 2014
- PPS (49) 2013
- PPS (48) 2012
- PPS (47) 2011
- PPS (46) 2010
- PPS (45) 2009
- PPS (44) 2008
- PPS (43) 2007
- PPS (42) 2006
 - Issue No. 1 (1-37)
 - Issue No. 2 (41-84)
 - Issue No. 3 (85-120)
 - Issue No. 4 (119-146)
- PPS (41) 2005
- PPS (40) 2004
- PPS (39) 2003
- PPS (38) 2002
- PPS (37) 2001
- PPS (36) 2000
- PPS (35) 1999

Editorial Board

Ethical Standards

Reviewers 2017

For Authors

Author Declaration

Instruction for Authors

Submission Templates

Guide for Authors

Copyright Statement

Fees

Submission/Login

For Reviewers

Survey of incidence of bunts (*Tilletia caries* and *Tilletia controversa*) in the Czech Republic and susceptibility of winter wheat cultivars

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Bunts (caused by *Tilletia caries* and *T. controversa*) belong to very important diseases of winter wheat because contaminated commodities (seeds, foods and feeds) affect the marketability of the crop on both domestic and export markets. They can be relatively easily controlled by chemical seed treatments. Due to the availability of effective chemical control, the reaction of wheat cultivars to bunts has so far not been an important trait for plant breeders in some areas of the world. However, if synthetic chemicals are not allowed, like in organic farming, untreated seed may quickly lead to a build-up of bunt to levels that render the crop unmarketable. The use of wheat cultivars partially or fully resistant to bunts could greatly contribute to ease the bunt problem. The reaction of winter wheat cultivars was evaluated in field tests. Seeds of winter wheat were inoculated with teliospores of *T. caries*. The reaction to *T. controversa* was studied under heavy natural infestation with spores in the soil. With *T. caries*, the heaviest infection was found in cvs Drifter and Ebi, while cvs Nela, Brea and Samanta had the lowest. The average level of infection with *T. controversa* was higher than that of *T. caries*. The cvs Niagara, Brea and Versailles had significantly lower numbers of bunt ears of *T. controversa* in 2002. The incidence of both bunts in grain samples that had not been cleaned and sorted after harvest was monitored for 4 years. A total of 1 058 samples collected from various locations in the Czech Republic were analysed for the presence of bunt spores and the species determined. The investigation demonstrated a rather widespread occurrence of bunts across the Czech Republic, with *T. controversa* being more frequent.

Keywords:

bunts; *Tilletia caries*; *Tilletia controversa*; cultivars; winter wheat; incidence of bunts; Czech Republic

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