



Occurrence of diseases in winter wheat cultivation according to agrotechnical factors

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Abstract

Influence of agronomic factors such as fore crop, type of cultivation (traditional and no-tillage) can be important for the occurrence of pathogenic fungi which colonizing winter wheat stems, leaves and ears. The experiment was conducted to assess occurrence of stem base, leaves and ear diseases of winter wheat cultivar Muszelka according to different production systems. The trials were carried out at the Field Experimental Station of the Institute of Plant Protection – NRI in Winna Góra. Winter wheat (variety Muszelka) after three different fore crops (oilseed rape, corn, cereals) was sown. Soil for the experiment was prepared in traditional and no-tillage system. The evaluation was performed at the flag sheath opening stage (BBCH 47) and at full maturity of grains stage (BBCH 75). During the observations of stem base diseases the percentage of infected plants (in various degrees) was evaluated, and disease index was calculated. Also the occurrence of diseases on leaves and ears was assessed. Macroscopic evaluation of the health of wheat stem base made in flag sheath opening stage showed higher infestation with *Fusarium* root rot than with eyespot (*Tapesia yallundae*). Using of different tillage systems did not influence significantly on the level of the occurrence of assessed diseases. The ratio of *Fusarium* root rot disease index vary depending on the fore crop. The results of experiment confirm usefulness of IPM system, where appropriate crop rotation plays an important role.