Title Influence of some agronmy factors on spike components after a rare incidence of fusarium head blight epiphytoty of winter wheat II. Effect of post-harvest residue incorporation

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Abstract

The investigation was carried out in a stationary agronomy trial in the spring of 2005. The year was characterized with a rare fusarium epiphytoty on common winter wheat. The experiment was performed in the trial field of Dobroudja Agricultural Institute - General Toshevo (North-East Bulgaria) with the aim to evaluate the effect of total fusarium infection on the spike components of winter wheat as influenced by the agronomic factors post harvest residues incorporation (PHR), mineral fertilization and previous crop.The variants of the trial were the following: A0 - growing of wheat without incorporating PHR of the previous crop and A1- growing of wheat with incorporation of the preceding PHR. In this PHR background, mineral fertilization was applied at rates N0P0 and N120P120 (kg/ha). It was established that the highest severity of infection was determined after previous crop maize fertilized with nitrogen rate N120P120. Incorporation of PHR also had a significant negative effect on the number of infected spikes per unit area. The value of the PHR harmful effect on this index was 1.2 infected spike/m2 more than in the check (A0) regardless of the fertilization variant. Depending on the type of previous crop, the harmful effect of the incorporated PHR was most evident after maize - 2.1 infected spikes per m2 more than in the check variant. The biometrical analyses on the spike components showed that grain weight per spike was influenced only by the type of previous crop. PHR did not have a noticeable effect on the number of grains per spike. The index 1000 grain weight was similarly affected, the effect of the previous crop being again most significant.