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Editor in Chief Wan-Quan CHEN

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THE IMPACT OF CLIMATE CHANGE ON THE ASEXUAL PART OF POPULATION OF *Blumeria graminis tritici* IN VOJVODINA REGION (SERBIA)

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Powdery mildew is a regular and economically important disease of wheat in Serbia. The asexual part of population *Blumeria graminis* f. sp. *tritici* consists of patothypes formed by asexual reproduction during spring.

The differential set of varieties and lines with resistance genes were sown in the plastic pots. At the one-leaf stage they were taken out into the field of wheat. After 48 hours the plants were getting back into the chambers with optimum conditions for plants and pathogen development. The sowing time of mobile nurseries, taking out into the field and getting back in the chambers and also the scoring were almost identical for all years. The screening of the virulence of the *B. graminis* f. sp. *tritici* population was done from the middle of March till the end of May. During that time the number of mobile nurseries was 8 – 12. First appearance of the pathogen was recorded on 29 March and the last on 16 May.

Climate change has a great influence on the time of appearance, number of generations and frequency of genes of the asexual part of population of *B. graminis* f. sp. *tritici*. The number of asexual generations decreased greatly, on only 3 up to 7 generations per year in period from 2008 to 2011 due to the impact of climate changes.

The most efficient genes in the asexual population of the parasite were: *Pm*2 +, *Pm*3a and combination *Pm*5 + 6. The most frequent genes within the asexual population of the parasite were: V5 + 8 (79.2%), Vd (66.9%) and V7 (60.4%).