SUSCEPTIBILITY STAGES OF BARLEY TO FUSARIUM HEAD BLIGHT

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Fusarium head blight, caused by *Gibberella zeae* (*Fusarium graminearum*) is an economical damaging disease in barley spikes. The objective of this study was to determine the susceptibility stages to infection by the pathogen. The experiment was conducted in greenhouse, with BRS Marciana cultivar, in a complete randomized design with eight treatments and three replications of ten spikes each. The treatments were: 1- spikes completely enclosed by the flag leaf sheath (SC); 2- five days after SC; 3- ten days after SC; 4- 14 days after SC; 5- 20 days after SC; 6- 24 days after SC; 7- 27 days after SC; and 8- 31 days after SC. The inoculation was done with a suspension of *F. graminearum* at $5x10^4$ conidia mL^{-1}. Plants were then kept in mist for 72 hours at 20 ± 4 ° C. Spikes were harvested 15 days after inoculation, dried and hand threshed. Grain infection by the pathogen was done in a PDA culture medium, after sterilization, in a complete randomized design with three replications of 100 seeds each. Scoring was performed five days after the incubation period. The incidence of FHB on the spike was 100% in all, but treatment 1, where the disease did not evolved. Symptoms in the flag sheath started in treatment 2 when the spikes had not emerged completely. The incidence (%) *of F. graminearum* in the grains of treatment 1 (2.67) differed from the others at 1%, by Tukey test. The treatments 2 (59.33) and 3 (66.33) were statistically equal to each other. The treatments 4, 5, 6, 7 and 8 were statistically equal, with higher incidence of infection in grains. Under favorable environment FHB affects barley from the exposure of the spikes and the sheath colonization can occur even when the spike has not emerged completely.

Keywords: scab; infection; *Fusarium graminearum*