



635-P: Severity of wheat blast on heads at different rates of nitrogen fertilization in Paraná State, Brazil

Wednesday, August 01, 2018

10:00 - 10:00

Wheat blast on heads (WBH), caused by the fungus *Magnaporthe oryzae Triticum* pathotype, is one of the most important yield-limiting wheat disease in Brazil reducing grain yield up to 74% in epidemic years. It has already been verified in experiments conducted under field conditions that WBH varies according to the use of nitrogen. Therefore, the objective of this work was to verify the effect of nitrogen rates applied as fertilizer in relation to (i) the severity of blast on the spikes and (ii) its impact on the yield of grains in wheat genotypes with different degrees of resistance to WBH. Four field trials were conducted in two locations in the north of Paraná, Brazil, known as the endemic area of WBH. One in Londrina (2015 and 2016) and the other in Floresta (2017 during two wheat crops). The experimental design was a complete randomized blocks, and treatments disposed in a factorial composed by N rates *versus* wheat genotypes. Nitrogen fertilization rates increased WBH severity only when there were favorable weather conditions to the fungus infection on rachis. The differences among wheat genotype resistances to blast were attributed mainly to the distinct periods of post-heading under favorable weather conditions. The results obtained can help the growers in the management of the nitrogen used in wheat fields in Paraná State, taking especially into account the resistance to WBH of the evaluated wheat genotypes.

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