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WHEAT BLAST EXPRESSION BY POTASSIUM FERTILIZATION

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Wheat blast, caused by the fungus *Pyricularia grisea*, is undoubtedly a limiting disease in the production of wheat in South America (URASHIMA ET AL. 2010). Mineral nutrients like potassium (K) can influence the increase or the reduction of diseases, expressing, many times, the resistance or susceptibility of the host. The objective of the work was to evaluate the effect of potassium fertilization in expression of the wheat blast in the field, in 2015. The expression of the wheat blast was compared in two wheat cultivars, BRS Gralha-Azul (susceptible) and BRS Gaivota (moderately resistant). The cultivars received 30 kg/ha of K applied as topdressing utilizing three K sources, [potassium nitrate (KNO₃), potassium sulphate (KSO₄) and potassium chloride (KCl)] in three stages of application (booting, flowering and in both stages). The experiment was carried on in block design, with four replications, in the factorial 2x3x3 scheme. Blast intensity was evaluated by the destructive method, collecting spikes (n>60) from a linear meter selected at random inside each plot. Statistical analysis ($p<0.05$) of the incidence and severity of the disease was performed by utilizing the Student's least significant difference (LSD) test. Significant difference was observed only between the wheat cultivars. Lower severity (8%) of blast was observed in the BRS Gaivota and higher severity (12%) occurred in the wheat cultivar Gralha-Azul. The blast incidence (48%) was similar in both cultivars. There was no observed significant difference of the K source and in the application timing, which showed severity and incidence levels lower than 10% and 50%, respectively. Some possible explanations of the non blast expression and the potassium fertilization would be due to the effect mediated by higher levels of K and by the interaction with other nutrients like nitrogen or due to higher responses in deficient plants.

Keywords: *Pyricularia grisea*; mineral nutrition; *Magnaporthe oryzae*