

Differentially Response of Superoxide Dismutase in Wheat Susceptible and Resistant Cultivars against FHB

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Abstract : *Fusarium graminearum* is one of the most destructive crop diseases in the world. Infection occurs during the flowering period in warm and humid conditions. It causes reduction in yield. Moreover, harvested grain is often contaminated with mycotoxins and its acetylated derivatives. *Fusarium* mycotoxins are potent inhibitor of protein synthesis, and thereby presents hazards for both human and animal health. A rapid production of reactive oxygen intermediates, primarily superoxide and hydrogen peroxide at the site of attempted infection considered as key feature underlying successful pathogen recognition. Here, we compared the time course activity of superoxide dismutase (SOD) as a first line of defenses against ROS- induced oxidative burst between FHB- resistant Sumai3 and susceptible Falat at 48, 96 and 144 hours after infection. Our results showed that Sumai3 SOD activity increased with time and reached the highest-level 4 days after infection while in susceptible cultivar Falat, SOD activity decreased during the first 96 h. after infection. Decreased was followed by an increased at 6 days after infection. According to our results rapid induction of SOD activity in resistant cultivar may play an important role in resistance against FHB in wheat.

Keywords : *Fusarium graminearum*, mycotoxins, resistant cultivar, superoxide dismutase

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