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BIOCHEMICAL PROFILING OF RESISTANCE IN CITRUS GERMPLASM AGAINST CITRUS CANKER

Muhammad Atiq¹, Nasir Ahmed Rajput¹, Akhter Hameed¹, Muhammad Younas², Yasir Ali¹, Waqas Ahmed¹, Hira Aslam¹ and Muhammad Ashfaq¹

University of Agriculture Faisalabad, Pakistan

Citrus canker (*Xanthomonas axonopodis* pv. *citri* (*Xac*)) is one of the most destructive diseases responsible for causing heavy economic losses by affecting the quality and quantity of produce. So far very little work has been done regarding oxidative metabolism of citrus and its role in resistance and susceptibility against citrus canker. In present study ten citrus cultivars (Jaffa, Tangerine, Musambi, Kinnow, Feutarl's early, Mayer lime, Sweet lime, Grape fruit, Blood red and china lemon) were artificially inoculated with *Xac* and biochemical alterations were estimated ten days after inoculation and these changes were compared with un-inoculated leaves. Biochemical analysis of Catalase (CATs), Peroxidases (PODs), Superoxide Dismutase (SOD), hydrogen

per oxide (H_2O_2) and total soluble proteins were performed. The results indicated that activity of these parameters increased in inoculated leaves among all these cultivars while level of total soluble proteins decreased in inoculated leaves. However, variations in these factors in response to *Xac* were genotype-dependent and these fluctuations might be interlinked with resistance and susceptibility of citrus cultivars. The investigations of this research are helpful for researchers and breeders to develop resistant cultivars by understanding and manipulating the changes in oxidative metabolism.

dratiq1@yahoo.com