

The change of peroxidase activity in three cucumber cultivars during development of powdery mildew infection

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Abstract

A study carry out to determine the change of peroxidase activity throughout development of powdery mildew infection that caused by *Sphaerotheca fuliginea* to three cultivars of cucumber :Beit alpha ,Jabbar and Babylon. The relationship between peroxidase activity and susceptibility of cucumber cultivar to powdery mildew was investigated . The result showed that peroxidase activity in leaves of cucumber cultivars increased significantly after inoculating with *S. fuliginea*. Peroxidase activity were correlated positively with development of disease .The highest rate of peroxidase activity were after seven days from inoculation . Increase of peroxidase activity in cultivars Beit alpha ,Jabbar and Babylon were 202.7%, 108 % and 171 % in infected tissues respectively compared with that of control of same cultivar . Also peroxidase activity in Jabbar cultivar tissue significantly higher than other cultivars. The Results of sporulation (conidia and conidiophores) of *S. fuliginea* on leaves of cucumber cultivars indicated that all cultivars were susceptible to this fungus ,but there were variations in susceptibility of cucumber cultivars ,then Jabbar cultivar was significantly more susceptible than other cultivars , therefore number of conidiophores of *S.fuliginea* was 7.2 (conidiophore /mm² leaves) on Jabbar cultivar leaves ,its significantly higher than Beit Alpha and Babylon (4.7 and 4 conidiophores /mm² leaves) respectively.Also number of conidia of *S. fuliginea* on Jabbar

leaves were higher than other cultivars .The result of conidia supported result of conidiophores that Jabbar cultivar more susceptible from other cultivars .