

عنوان مقاله:

Involvement of protective enzymes and phenols in decay (Penicillium expansum) resistance in apple

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نویسندگان: Tahmineh Naeem-Abadi - *Vali-e-Asr University of Rafsanjan, Rafsanjan, Iran.*

.Mansureh Keshavarzi - Horticultural Research Institute, Karaj, Iran

خلاصه مقاله:

Blue mold disease caused by Penicillium expansum is a major post-harvest disease of apples. In this research, the biochemical basis of apple resistance to this pathogen was studied in two relatively resistant and susceptible cultivars, Granny smith and Mashhad, respectively. The activities of catalase (CAT), peroxidase (POX), superoxide dismutase (SOD) and polyphenol oxidase (PPO) enzymes and polyphenol content were compared at different time intervals of • to Y days. Based on the results, fruit polyphenol content of Granny smith was higher than that of Mashhad PPO, SOD and CAT activity was higher in Granny smith than Mashhad but CAT activity decreased three days post-treatment. No detectable difference was found in POX activities in the two cultivars. It is concluded that polyphenols contribute in apple resistance to blue mold. Activation of PPO and SOD, lack of POX activity and decrease of CAT activity, all .together, could lead to a toxic environment around the blue mold fungus

کلمات کلیدی:

Penicillium expansum, blue mold, Apple, pathogenesis-related protein

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