

Title Expression of *PPO* and *POD* genes and contents of polyphenolic compounds in harvested mangofruits in relation to Benzothiadiazole-induced defense against anthracnose

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Abstract

Mango is susceptible to decay caused by pathogen infection during storage and transport. Chemical fungicides have been the major weapons against postharvest fungal diseases, but they have caused increasing public resistance. BTH does not have anti-microbial properties, but it induces systemic acquired resistance in plants. Here the relationship between BTH-induced disease resistance in harvested mangofruits and expression of *PPO* and *POD* genes, together with contents of total phenolic compounds (TPC), were investigated. BTH treatment reduced disease indices and lesion diameter. Compared with the control, BTH increased TPC, up-regulated gene expression and enhanced enzymes activities of *PPO* and *POD* during the latter period of storage life, suggesting that enhanced gene expression of *PPO* and *POD* played an important role in BTH-activated defense response of mangofruits and that the up-regulation of the two genes were related to the accumulation of TPC. This study also showed that BTH-induced resistance in harvested mangofruits could differ with varieties.