

Effect of hot water treatment on the inhibition of anthracnose, PG, PME activity and PGIP gene expression in harvested papaya fruits

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Abstract

The effect of hot water treatment on inhibition of anthracnose, activities of polygalacturonase (PG) and pectin methylesterase (PME), and polygalacturonase-inhibiting protein (PGIP) gene expression in harvested papaya fruit was studied. Incidence of anthracnose of harvested papaya fruit was reduced by appropriate hot water treatment. Immersion in water at 54°C for 4 min showed an obvious effect on controlling postharvest decay in papaya fruits. Fruit ripening was delayed, PG and PME activities were significantly inhibited, and PGIP gene expression was enhanced in hot water-treated papaya fruit. Results suggested that hot water treatment might induce resistance of papaya fruits to anthracnose disease and extend the storage life.