

Title Effect of hot water treatment on the inhibition of anthracnose, physiological activities and polygalacturonase- inhibiting protein (PGIP) gene expression in harvested papaya fruit

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Abstract

The effect of hot water treatment on the inhibition of anthracnose, the activity of polygalacturonase (PG) and pectin methylesterase (PME), polygalacturonase-inhibiting protein (PGIP) gene expression in harvested papaya fruit were studied. The incidence of anthracnose of harvest papaya fruits was found to be reduced by proper hot water treatments. Papaya fruits immersed in hot water at 54°C for 4 min. had obvious effects on controlling postharvest decay. The ripening of hot-treated fruit was delayed, the activity of PG and PME was obviously inhibited and PGIP gene expression was enhanced in hot-treated fruit. The results suggested that hot water treatment might induce the enhancement of resistance to anthracnose disease.