

Title Investigation of pre and postharvest pathogens caused mangosteen fruit rot
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Abstract

The specific objective of research provided a perspective on the status of mangosteen (*Garcinia mangostana*) diseases in East of Thailand. A number of diseases were observed at different intensities in the orchards visited. The incidence of major fungal pathogens determined by isolation from persistent sepals of mangosteen fruits in 7 maturity stages since 15-110 days to postharvest period. These pathogens included *Pestalotiopsis* sp., *Phomopsis* sp., *Lasiodiopodia theobromae*, *Colletotrichum gloeosporioides*, *Phoma* sp. and *Fusarium* sp. Incidence of *Pestalotiopsis* sp. associated with persistent sepals 41.1-74.4% in all stages. Fruit hardening occurred after infection in all stages especially young fruits. Postharvest fruits from 7 orchards were found incidence of *Pestalotiopsis* sp., *Phomopsis* sp. and *L. theobromae* at 46.3, 22.5 and 19.1 % respectively. The results suggest that earliest indicator of fruit rot incidence at harvest may was the infection level in flowering. *Pestalotiopsis* sp. and *L. theobromae* were wound inoculated in depth 2 mm on fruit surface. Inoculated fruits with both fungi did not appeared necrotic lesions on surface of fruits after incubation 14 days at 25°C. *L. theobromae* and *Pestalotiopsis* sp. developed into small patches of epidermis and radial sections through the surface in 2 and 4 mm depth, respectively. Mycelium was found inside when making cross section fruit and fruits hardened.