

Improving Productivity And Quality Of Indonesian Mangosteen

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Abstract:

Indonesia has numerous edible fruit species found over the archipelago. Some of fruit species have become commercial, but they have not been cultivated optimally; among of them is mangosteen (*Garcinia mangostana* L.). Mangosteen found in Indonesia over the archipelago, grows in compound garden and agro forestry-like garden, at lowland to up to 800 m above sea level. The production center of mangosteen is in western of Indonesia, including Sumatra, Java, Bali and West Nusa Tenggara. Mangosteen fruits are harvested all year long through archipelago. However, main harvesting season is September to April. Mangosteen production fluctuates from 30,000 to 70,000 tons a year, and high quality fruits are mostly exported. The fruits are exported to Taiwan, Singapore, Hong Kong, Malaysia, United Arab Emirate, Saudi Arabia, and Netherlands. The demand of mangosteen in world market has increased markedly. To meet the export demand, improvement of existing trees and development of new orchard should be conducted. Center for Tropical Fruit Studies of Bogor Agricultural University has been developing several approaches to improve existing trees and technology package to establish mangosteen orchard, which consists of (a) introducing new mangosteen clone 'Wanayasa', (b) improvement rooting system using *mycorhyza* and *Agrobacterium rhizogenes*, (c) enhancement of tree growth using double-rootstock system, (d) cropping system, (e) irrigation and fertilization system, (f) trees husbandry, and (g) harvest and post-harvest technology. We are also conducting several researches on genetics variability identification and development, studies on cause of gamboges and methods to overcome the gamboges problem on fruits, developing non-destructive technology for detection of gamboges, and improving technique for prolonging shelf-life of fruits.