Storage life of mangoes (*Mangifera indica* L) cv Gedong extended by chitosan and emulsifier treatment

Setyadjit* and Suyanti

Indonesian Centre for Agriculture Postharvest Research and Development, Jl. Tentara Pelajar no. 12, Bogor 16114, Indonesia

**Corresponding author's email address: pascapanen@yahoo.com*

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ABSTRACT

'Gedong' mango orchards in Cirebon, West Java are often neither fertilized nor use synthetic chemicals for pest control. Thus these orchards are believed to be organic even though further certification is needed. As with mangoes coming from other growing regions, 'organic' mango cv. Gedong also has short storage life after harvest. Therefore treatments to prolong their quality and self life were assessed. The treatments included a combination of emulsifier for coating with chitosan; emulsifier and combination of chitosan – emulsifier on quality and shelf life after storage at 23-24°C. 'Organic' Gedong mangoes from Cirebon in West Java were harvested at commercial maturity(i.e. green skin color) and dipped in chitosan solution (0, 0.5, 0.75 and 1%), emulsifier (0 and 3%) and the combination of chitosan-emulsifier treatments. These fruit were then stored at 23-24°C and assessed for quality. The results showed that chitosan treatment and emulsifier delayed the ripening process for up to 8 days compared to control. Coating with 0.75% chitosan provided the best result. After 12 days of storage, the 'organic' mango ripened normally, ie developed yellow skin colour, soft texture with TSS 14.5%, and total acidity 0.068%.