ABSTRACT

YULINDA TANARI. Study to Control Yellow Latex and Pericarp Hardening of Mangosteen Fruit (*Garcinia mangostana* L.) with Calcium Spraying Aplication. Under direction of DARDA EFENDI and ROEDHY POERWANTO.

Calcium is one of important elements of cell membrane component and strengthen cell wall. Calcium is normally bound to pectin compound as a middle lamella component. Calcium deficiency affect the degradation of cell wall integrity. Low calcium content in the pericarp of mangosteen fruit could triggering the incidence of yellow latex or gamboges disorder on aryl and fruit pericarp. An experiment was conducted to determine the optimum combination of spraying frequency and concentration of CaCl$_2$ in controlling yellow latex, pericarp hardening and quality of fruit. Factorial experiment was designed with two factors and three replications. The first factor was frequency of CaCl$_2$ spraying that consist of three levels, i.e twice, four and six times. The second factor was calcium concentration that consist of four levels, i.e 0, 12, 24 and 36 g L$^{-1}$. Result indicated that the combination of frequency of six times with 24 g L$^{-1}$ is effective to reduce percentage of yellow latex in the aryl by 86% and 69% in the pericarp without pericarp hardening and reduction in fruit quality at harvest time and after 20 days storage.

Keywords: frequency, concentration, gamboge, calcium