

International Conference on

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## Effects of *Gum arabic* surface treatment on whole mangoes and evaluation of canning technology for mango chunks in Kenya

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Mango production in Kenya is about 581,290 metric tonnes. About 40% of the total production goes to waste due to poor handling practices and lack of processing options. Improvised processing and preservation methods make it possible for the mangoes to be kept for long as their keeping quality will be improved. The general objective of the study will therefore aim at contributing to improved food security, nutrition and economic well-being of Kenya through development of methods to preserve quality and reduce post-harvest losses in the mango value chain. Specifically, a baseline survey in Makueni County of Kenya will be conducted to document local mango preservation methods, using questionnaires. The effect of *Gum arabic* surface treatments on mango quality will be determined by treating the mangoes with various concentrations (0, 5, 10

and 15%) of *Gum arabic* solution. Microbial and physico-chemical analysis on the whole mangoes before treatment (day 0) and at 5 days interval till the mangoes go bad, will be done. Canning technology will be evaluated by canning mango chunks in different sugar syrup concentrations (0, 10, 20, 30, and 40%) for preservation. Microbial and physico-chemical analysis will be done on the chunks as shelf life tests at an interval of one month for six months. Sensory analysis involving 30 panelists will be conducted on the same. The results of the study will be useful in informing the mango value chain actors on the effective preservation measures required to reduce post-harvest losses in mangoes, thus improving farmers and processor's income.

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### Notes: