

# Development of Continuous Type of Peeling Machine For Mango<sup>1</sup>

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## Abstract

The purpose of this study is to develop a continuous and highly efficient type of green mango peeling machine in order to replace the traditional hand-peeling process. In this study, a single bucket batching type of peeling process was upgraded to a ten-bucket type of peeling process. Ten round buckets (26.5cm in diameter and 15.5cm in depth) were placed on a circulating conveyor with an elliptical route which was driven by two gears. A rotating knife set (75cm in diameter) organizing by twenty eight pieces of peeling knife was mounted 10 mm below the bottom of the bucket. During the peeling operation, certain amount of green mango were placed into the bucket. Then, the circulating round buckets will bring the green mango into the rotating knife set area for skin peeling. After the peeling action is finished, the peeled mango were carried out by the circulating round bucket.

The result of this study indicated that the maximum peeling efficiency (about 95%) for this unit can be achieved under the following operating conditions: 1.0 kg mango per bucket; 150-180 rpm rotating speed for rotating knife set ; 0.6-0.8m/min circulating speed of round bucket movement; and 110-140 kg/hour feeding rate. This feeding rate is about six times faster than hand peeling. The efficiency of this unit can also be improved further by installing an automatic feeding system with 60 kg capacity. In addition to green mango peeling, this unit can also be used for taro and potato peeling operation.

**Key words: Green Mango    Peeling    Peeling Machine**

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