

Abstract

The objective of the development of a papaya peeling machine and a papaya scraping machine is to improve papaya peeling and scraping capacity of som-tum vendor. The papaya peeling machine consisted of a moving blade, 15 cm long, with a spring pressing blade to papaya surface. The papaya was fixed at both ends and rotated. From testing and evaluation, it was found that optimum spring force compressing blade was at 1.5 cm extension (spring constant = 2.67 kg/cm) at 55 degree blade angle. Completed peeling (excluded both ends) was achieved at 180 rpm blade speed and papaya rotating at 140 rpm. Comparing with manual peeling, the capacity of manual peeling was more than the peeling machine about 1.36 times. The machine could complete peeling (excluded both ends) but manual peeling remained 1.4% peel area. Peel weight from the peeling machine was 2 times compared to manual peeling. The papaya scraping machine consisted of a blade-disk and feeding chute. Papaya fruit must be cut into pieces before feeding. The tests were conducted at three speeds of blade-disk; 225 250 and 275 rpm and 3 inclined angles of feeding chute; 30 40 and 50 degree. The papaya lines were most satisfied by the vendors at 225 rpm blade-disk and 50 degree chute angle. Comparison between the machine and manual scraping; the machine capacity was 3.6 time faster than manual scraping with less residues.