

Title Mechanical bruising of young coconut
Author Udomsak Kitthawee, Siwalak Pathaveerat, Tanarat Srirungruang and David Slaughter
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Abstract

One of the most important problems affecting the successful marketing of fresh young coconut fruit is bruising. Bruising frequently occurs during postharvest operations due to excessive compressive force and impact. A survey showed that the majority (50–100%) of young coconuts in wholesale or retail markets in Thailand was bruised. Bruised areas of $<100 \text{ mm}^2$ and bruise counts of 4 per fruit were predominant. The mechanical bruising of young coconut was characterised by browning in the husk tissue under the skin. Bruise volume was linearly correlated with either compression or impact energy above the bruise threshold limit. Good correlation was observed between the probability of bruise occurrence and compression or impact energy below the bruise threshold. Based on the variations in the minimum energy level required to bruise the fruit, young coconut fruit is much more susceptible to bruising occurrence under impact than under compression.