



[Available Issues](#) | [Japanese](#)

Author: [ADVANCED](#) | Volume Page

Keyword:



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > **Abstract**

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Shock Analysis of Lemon Fruit from Harvesting to Packing Lines

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After harvesting, lemon fruit are transported to packinghouses where they are packed and quality is checked. We measured the shock that lemon fruit received during transportation and processing stages in order to determine the causes of shock damage. The shock was measured using a “dummy lemon” that contained a shock sensor implanted in polystyrene. It was found that lemon fruit received the most frequent

the packinghouses. The second highest amount of shock was received while the amount received during truck transportation was not especially high. The occurrence of shock exceeding 5 G during harvesting was primarily from the farmers. This shock resulted from numerous factors, such as the harvested lemon fruit are thrown into the collection basket, and the the lemon fruit from the collection baskets to shipping containers. Shock was mainly generated by gaps in the drying process, rotation drum in front of the light sensor and falling from the sorting line to the boxing sorting, which requires a longer brush washing time, the amount of shock fruit was many times higher than that produced by the light sensor so it is necessary to improve the sorting lines in order to reduce shock.

Key Words: [acceleration](#), [apex](#), [equator](#), [fall](#), [transportation](#)

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