

ABSTRAK

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Pisang Cavendish merupakan komoditas buah tropis yang sangat populer di dunia. Provinsi Lampung merupakan salah satu daerah penghasil pisang Cavendish terbanyak di Indonesia. Namun infrastruktur jalan di Lampung masih kurang baik dan berlubang sehingga dapat menyebabkan terjadinya kerusakan mekanis pada buah pisang yang akan didistribusikan ke daerah lain. Kerusakan mekanis pada buah pisang akan menyebabkan luka pada bagian tertentu yang dapat menurunkan nilai mutu dan nilai jual buah pisang, untuk itu perlu diketahui persentase kerusakan mekanis yang terjadi pada pisang akibat getaran selama proses pendistribusian.

Penelitian ini bertujuan untuk mengetahui kerusakan mekanis buah pisang yang tertinggi, yang terjadi akibat frekuensi getaran yang berbeda dan kondisi buah saat digetarkan. Bahan dan alat yang digunakan adalah pisang Cavendish dan meja simulasi getar. Rancangan percobaan yang digunakan yaitu Rancangan Acak Kelompok dengan pengelompokan berdasarkan kondisi buah pisang saat digetarkan dan faktor frekuensi getaran.

Hasil penelitian menunjukkan banyaknya persentase kerusakan mekanis buah pisang Cavendish. Persentase luka pecah terbanyak terdapat pada pisang yang digetarkan pada kondisi *ripening* dan frekuensi 1,67 hz dengan nilai 39,5% kerusakan. Luka Pecah terjadi hanya pada perlakuan pisang yang digetarkan pada kondisi *ripening* dan frekuensi 1 hz dan 1,67 hz. Persentase luka gores terbanyak terdapat pada pisang yang digetarkan pada kondisi belum *ripening* dan frekuensi 1,67 hz dengan 50% kerusakan. Pengelompokan buah berpengaruh terhadap parameter total padatan terlarut (TPT) dan kekerasan buah, namun tidak berpengaruh terhadap parameter susut bobot. Berdasarkan hasil uji lanjut BNT taraf 5%, perlakuan kontrol (B0) berbeda nyata dengan perlakuan yang digetarkan (B1 dan B2) untuk parameter TPT. Sedangkan untuk parameter kekerasan buah, perlakuan control dan perlakuan penggetaran pengaruhnya tidak berbeda nyata.

Kata Kunci: Pisang Cavendish, kerusakan mekanis, simulasi transportasi.

ABSTRACT

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Cavendish Bananas which is known as a really popular tropical fruit commodity in the world. Lampung Province is the one of banana province where produce the high volume of banana. Yet the road infrastructure in Lampung is still deficient and has lot pothole, so it might be causing mechanical damage to banana fruit that will be distributed in another region. Mechanical damage in banana fruit will cause injury in certain part which may decrease the quality and selling value of banana fruit, so it is a must to know the mechanical damage percentages in banana fruit which caused by vibration during the simulation process.

This research was designed to find out the highest of percentage of mechanical damage in banana fruits. Materials and tools used were Cavendish banana and vibration simulator table. Designed trial used were Random Designed Group which classifying based on the condition of banana fruit while getting vibrated and vibration frequency factors.

The result showed the highest percentage of split injury found in banana fruit which getting vibrated in ripening condition and 1,67 hz frequency of 39,5%. Split injury hapenns only in the treatment of banana which getting vibrated in ripening condition and 1 hz and 1,67 hz frequency. The highest percentage of

scratch injury in banana fruit which getting vibrated in non-ripening bananas and 1,67 hz frequency with 50% damage. Fruit classification has affect on the total soluble solid (TSS) and firmness of fruit, however it doesn't influence to weight loss parameter. Based on the further test of BNT in 5% level, TSS affects on vibration frequency has an obvious difference among Control (B0) to the fruits which getting vibrated (B1 and B2), and the effect of fruit conditionwhile getting vibrated has an obvious differentiation. Based on further test of BNT in 5% level, the control treatmen (B0) had significant effect with vibrated fruits on total soluble solid. In contrast for firmness index, the control fruits are not significant effect vibrated bananas.

Keywords: Cavendish Banana, mechanical damage, simulation transportation.