

**PENGARUH GETARAN ALAT TRANSPORTASI TRUK TERHADAP  
KERUSAKAN TANDAN BUAH SEGAR KELAPA SAWIT  
(*Elaeis guineensis* Jacq) DARI TEMPAT PENGUMPULAN HASIL  
KE PABRIK KELAPA SAWIT**

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**INTISARI**

Salah satu tahap yang perlu mendapatkan perhatian khusus dalam budidaya kelapa sawit yaitu tahap panen dan pascapanen. Hal ini dikarenakan di dalam proses pascapanen kelapa sawit, kerusakan buah sering terjadi, contohnya pada proses pengangkutan. Tujuan dari penelitian ini yaitu untuk mengetahui pengaruh dari getaran alat transportasi yang digunakan dan juga pengaruh dari susunan tandan buah segar pada bak truk pengangkut terhadap kerusakan buah kelapa sawit. Truk yang digunakan yaitu truk dengan bak besi. Getaran alat transportasi diukur menggunakan *vibration meter* dan susunan buah yang digunakan yaitu lapisan atas, tengah, dan bawah. Parameter kerusakan yang digunakan yaitu luasan luka yang terjadi pada berondolan. Dari hasil penelitian didapatkan hasil berupa index memar sebesar 1,05. Dari uji statistik yang dilakukan getaran alat transportasi tidak berpengaruh terhadap kerusakan buah dibuktikan dengan signifikansi 0,615. Sedangkan pola susunan buah berpengaruh terhadap kerusakan buah dibuktikan dengan signifikansinya sebesar 0,01. Nilai determinasi antara laju pertambahan kerusakan buah terhadap jarak bernilai sebesar 0,8983 yang berarti keterikatan perubahan kerusakan buah dengan jarak pengangkutan sebesar 89,83%. Nilai determinasi antara laju pertambahan kerusakan buah terhadap waktu bernilai sebesar 0,8686 yang berarti keterikatan perubahan kerusakan buah dengan waktu pengangkutan sebesar 86,86 %. Dari hasil ini dapat disimpulkan bahwa getaran alat transportasi tidak berpengaruh terhadap kerusakan buah sedangkan pola susunan buah berpengaruh terhadap kerusakan buah.

Kata kunci : Kelapa sawit, Transportasi, Getaran, Kerusakan Buah

**EFFECT OF VIBRATION ON TRANSPORTATION EQUIPMENT BY  
TRUCK TO THE PHYSICAL DAMAGE OF FRESH FRUIT BUNCH OF  
PALM OIL (*Elaeis guineensis* Jacq) FROM COLLECTING POINT  
TO THE FACTORY**

**ABSTRACT**

One of the process which needs more attention in the cultivation of palm oil is that on its harvesting and postharvesting. This is because in the postharvest process of palm oil, fruit damage is often to be found, for example on the transport process. The purpose of this research is to know the effect of vibration during transport process as well as the arrangement of fresh fruit bunch (FFB) on the truck to the fruit damage. The vibration was measured using vibration meter. The arrangement of FFB was differ by three: upper layer, middle layer, and lower layer. The damage parameter decided on the damage area which occurred on the fruit. The result of the research showed that damage index measured was 1.05. From the statistical analysis, it was known that the variation of vibration did not effect the fruit damage, proven by the significant number that more than 0.05, which was 0.615. Meanwhile, the variation of FFB arrangement on truck did effect the fruit damage, proven by the significant number that less than 0.05, which was 0.01. Determination number between the increasing of fruit damage to the distance of transport was 0.8983. It means that 89.83% fruit damage did effected by the distance of transport. After that, determination number between the increasing of fruit damage to the duration of transport was 0.8686. It means that 86.86% fruit damage did effected by the duration of transport. From the result of this research can be concluded that vibration did not effect the fruit damage, while the arrangement of the FFB on truck did effect the fruit damage.

Key words: Palm oil, transportation, vibration, fruit damage.