

**INFLUENCE OF ACOUSTIC WAVES ON THE SHELF LIFE QUALITY OF
MATURE MANGO (*Mangifera indica* L. var. *kalabaw*)**

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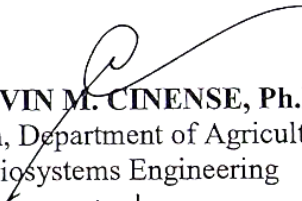
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BIOGRAPHICAL SKETCH

The researcher of the study, Kimberly S. Matias was born on June 21, 1997 in Cabanatuan City and now living with her family at Malayantoc Sto. Domingo Nueva Ecija. She is the eldest child of Venancio Matias and Digna Matias. She has a younger brother named Hero S. Matias.

She finished her primary education at Malayantoc Elementary School and received the award for being the class Salutatorian and other special awards. She took her secondary education at Santo Domingo National Trade School and received the National Certificate for completing the vocational course of Garment Technology. Year 2014, her parents sent her to Central Luzon State University to take the degree of Bachelor of Science in Agricultural and Bio-systems Engineering. Although it's not her passion in life, but she claimed that there will always be a demand for skilled engineers especially in the field of agriculture and she can assure herself for a better and brighter future.

She is not only academically inclined but she is also good in other field such as sport. She is a member of student athletes. She is an active player of Karatedo. She had medals and certificate for winning the competition such as University Intramurals and SUC-III Olympics (SCUAA).

Finally, she is also a member of various organizations namely; the Singles for Christ (SFC) and Maharlika Karatedo Kai of the Philippines International as brown belt.

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ABSTRACT

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Nowadays, Philippines facing the major problem in agriculture sector, which is the post-harvest lost due to short shelf life of perishable crops. This study aimed to determine the influence of acoustic waves on the shelf life quality of mature mango. Specifically, it aimed to determine the time of exposure that will give the optimum marketable quality of mature mango. Prior to storage, mature mango samples were subjected to acoustic wave 1 KHz at 100 dB.

Mature mango fruits from the farm were exposed to acoustic waves at different levels: T1 (control treatment) – zero exposure; T2 – 4 hours of exposure; T3 – 6 hours of exposure; and T4 – 8 hours of exposure. Subsequently, mature mango were stored in a chiller at 10° C. Considering the surface color, total soluble solids content and flesh firmness, the optimum exposure time of mature mango to acoustic waves that can give the best physicochemical and mechanical properties was determined.

Result showed that under zero exposure, samples were marketable until the 11th day of storage. Four hours of exposure gave the best physicochemical and mechanical property of mature mango. It also gave the optimum shelf life of the mature mango quality with 23 days. On the other hand, additional marketable days of 9, 6 and 3 for exposure time of 4 hours, 6 hours and 8 hours, respectively.

Over all, it can be concluded that the most effective treatment in this study was the Treatment 2 (4 hours of exposure). Moreover, acoustic waves effectively slowed down the ripening and deterioration of the mango.

Keywords: Acoustic waves, frequency, amplitude, mature mango, shelf life

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