

ABSTRAK

Packaging plays a crucial role in maintaining the quality of fruits during their movement through the supply chain, as fresh fruits are perishable products that are susceptible to physical and chemical changes. During transportation and storage, fruits can experience various stresses such as shocks, friction, temperature fluctuations, humidity changes, and exposure to air. These factors can lead to damage and alterations in the physical and chemical properties of the fruit, ultimately reducing its market value and competitiveness. The fruit supply chain consists of key activities including transportation and storage. One of the main challenges in the fruit supply chain is quality deterioration due to weight loss, decreased water content, pH changes, and mechanical damage. The Safefruit transport crate is an innovation designed to address these issues and optimally maintain fruit quality. This study compares the performance of the Safefruit crate with conventional plastic baskets through tests on weight loss, water content, pH acidity during storage, and mechanical damage from shocks during transportation. Data collection was conducted with ten replications for each group. The results indicate that the Safefruit transport crate is more effective in reducing weight loss, preserving water content, and preventing mechanical damage during transportation. However, this innovation does not demonstrate an advantage in maintaining the pH acidity of fruits during storage.

Kata Kunci: *Supply Chain, Loss Weight, Water Content, pH Acidity, Mechanical Damage, Distribution*