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Reliability Analysis on European Cucumber Using a Temperature-Humidity Model

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Abstract: Nowadays every competitive advantage in the industrial sector is temporary, and manufacturing companies must innovate in any area of the process to remain competitive. Recently, industrial engineering tools have been applied in service areas. Such is the case of the use of methods of industrial engineering in areas of the agronomic industry. This work focuses on the development of a reliability model applied to the effect of temperature and humidity on European cucumber. Due to the impact of the loss of quality attributes in the economy, attention is drawn to enhancing research to know the effects of the environmental conditions in which the product is subjected through the storage process to the final consumer. For this reason, it is necessary to perform reliability tests on European cucumber to analyze the effect of temperature and humidity on storage as factors causing the loss of product quality. As a result, it is obtained a reliability model in order to predict the storage time on the final product. Finally, a prediction on the time of storage and logistics is determined.

Keywords: Reliability Analysis, Accelerated Life Testing, Temperature-humidity model, Continuous Improvement.