

[P1.01]

Application of survival analysis to determine the persimmon cv. 'Rama-forte' sensory shelf- life

M. Martineli¹, R. Deliza^{*2}, C.M. Rezende¹, M.J.O. Fonseca², A. Soares², C.T.G. Mattos², L. Garitta³

¹Federal University of Rio de Janeiro, Brazil, ²Embrapa Food Technology, Brazil, ³Instituto Superior Experimental de Tecnología Alimentaria, Argentina

The demand for good quality fruits grows in the market every year. In spite of this, fruits and vegetables are still sold in inadequate packaging in Brazil, which causes injury to the product, damaging the appearance and, consequently, the commercial value of the product. Studies have been carried out to develop more appropriate packaging for transporting and storing fragile fruits such as persimmon. However, the packaging effectiveness to protect the fruit against injuries and damages has to be investigated. The objective of this study was to evaluate the effect of three different packagings for transport (wood box, cardboard and a new customized) on consumer acceptance/rejection of persimmon (*Diospyrus kaki* L.) cv. 'Rama - forte ' during the sensory shelf life, using Survival Analysis. The fruits were evaluated on days 3, 5, 7, 9, 11, 13 and 15 after harvest by about 60 persimmon consumers. For the appearance evaluation, the single batch of fruit was assessed throughout the study. The aroma and flavor, every evaluation day, fruits randomly selected were sanitized, cut into pieces enough to perception of aroma and flavor and served to consumers. Upon receiving the samples, participants evaluated the fruits and answered "yes" or "no" to whether they would buy the persimmon, based on its appearance and also whether they would consume it, if they already have the fruit at home. Fruits packed and transported in customized packaging showed longer life, according to consumer evaluation, where 25% of consumers rejected the appearance of the fruit of this package around 10 days after harvest, while for the wooden box and cardboard this percentage was reached approximately at 6 and 8 days after harvest, respectively. When the rejection of appearance occurred on the order of 50%, the fruits of customized packaging also showed superior quality, being rejected by consumers only to 13 days after harvest, while the wooden box and cardboard, rejection occurred near to 6 and 9 days after harvest, respectively. For them and the cardboard packaging, the sensory shelf life was longer in the context of eating than buying. This result might have happened because consumers considered that once they paid and took the product home they would eat the fruit anyway, despite it had no edible quality. This effect was not so evident for customized packaging. One possible cause would be the fact that this package promoted maintenance of the integrity of the fruit during transportation, developing great quality characteristics in maturing and later started degradation processes (senescence). The rejection, therefore, was due overripe fruit, as expected for this package.