

Title Relationships between shelf life, health and quality of apple fruit
Author V. Chitu, E. Chitu, S. Nicolae, L. Filipescu, A. Ionita, M. Murgea Cîrjaliu
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Abstract

An open field experiment regarding the behavior of *Malus × domestica* ‘Jonathan’ apple fruit during temperature control storage was set up at the RIFG Pitesti – Maracineni, Romania. A field test was organized on 2 plots (V1, reference plot and V2, foliar treated plot with a Frucol 0.5% solution) and randomized over three replicates and 10 fruits analysis per plot. The fruit treatment was extended with a calcium chloride 1% solution application in two stages before and one stage after harvesting. All fruit quality parameters measurements were made immediately before the harvest, after 90 days, and respectively 180 days of storage, using common recommended procedures. Causes and extent of fruit decay on the whole length of storage were broadly discussed and analyzed in terms of foliar treatment outcome and impact. Statistical correlation according to the Duncan test and Shapiro-Wilk was used to validate the results’ consistency. Some relevant accounts on storage diseases and physiological disorders responsible for fruit decay and breakdown concluded the study, on the grounds of microbiological tests and visual surveillance over the entire period of storage.