

THE INFLUENCE OF THE STORAGE INTERVAL ON QUALITY OF THE APPLE STORED UNDER CONTROLLED STORAGE CONDITION

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Abstract

Apples, fruits that are characterized by taste qualities, nutritional, prophylactic and therapeutic value can be consumed in fresh condition for a long time when are stored under suitable conditions. Thus, it was aimed to identify the main organoleptic and physico-chemical changes on the apples preserved within the *Cerasus Grup* Cotnari deposit by collecting samples represented by six apples varieties (*Golden Reinders*, *Golden Delicious*, *Gala*, *Jonared*, *Idared* și *Braeburn*) in two different intervals, respectively: November 2018 and January 2019. In terms of weight losses, it was noted that these ranged between the minimum value of 5,8% for *Gala* variety and maximum of 15% for *Golden Reinders* variety. The value of the firmness decreases, the differences between the two collecting samples periods being between 0,7 kgF/cm² (for *Jonared* variety) and a significant difference of 1,9 kgF/cm² for *Braeburn* variety. Compared to the reference values that indicate an adequate storage at the values of firmness between 5 to 7 kgF/cm², it evidences indicates the urgency of the removal of the *Braeburn* variety from storage to marketing, which has a firmness value of 5,7 kgF/cm² în January. The pH values were within the reference limits between 3,6 – 5 in both quality control intervals. There was a slight decrease on the pH values for all the varieties analyzed, an aspect closely correlated with the increase of the percentage of sugars by a 1% as a result of the hydrolysis of the starch and its transformation into reducing carbohydrates during storage compared with the values obtain for the sampling from November. The results obtain for the vitamin C content for samples collected in November indicate a fall in the reference values (7 – 12 mg/100 g) for all varieties analyzed excepting the *Golden Reiders* variety which is lower (5,28 mg/100 g). Most varieties evidence a decrease on vitamin C content by 2 mg/100 g in January, excepting the *Golden Reinders* and *Gala* varieties, who maintain their values constant. The results of the organoleptic and phytosanitary evaluation, pH values, iodine tests well as weight losses and firmness values have shown a major importance during the valorification of the stored fruits because they can indicate exactly the optimal moment for marketing in terms of economic efficiency. drafted in English (10-15 rows, with special reference to research results).

Key words: apple quality, controlled storage condition, vitamin C