THE INFLUENCE OF HARVEST TIME ON JONATHAN AND GOLDEN DELICIOUS APPLE CULTIVARS STORAGE LIFE

Zagrai Luminița

Fruit Research Station Bistrita, Drumul Dumitrei Nou, nr. 3, Bistrita, 420127, Romania; e-mail: lumizagrai@yahoo.com

Key words: apple, harvest time, storage life, soluble sugar, dry matter, acidity.

SUMMARY

The experiment was carried out during 2003-2005, at Fruit Research Station Bistrita. In Romania, the Jonathan and Golden delicious cultivars represent over 35% from the all cultivated cultivars (Braniște et. al., 2004). Immature fruits have a low quality and are very susceptible to some physiological disorders, like bitter-pit and scald, and the over mature fruits are susceptible to other physiological disorders, like water core and internal browning, all of these affecting the quality of fruits (Blanpied and Smock, 1982; Kader, 2002).

The objective was to determine the influence of harvest time on storage life on Jonathan and Golden delicious apple cultivars. The fruits were harvested at five moments, at a rate of 7 days, beginning with 10-13 September. The apple fruits were stored into chambers from the basement of building, where the temperature was between 3-9˚C and the relative air humidity, 50-80%. After six-month storage, on both cultivars, the lowest weight losses were for the variant harvested in the period 1-4 October (16% on Jonathan cv. and 17.4% on Golden Delicious cv.), and the higher weight losses for the treatment harvested in the period 8-11 October (20.9% on Jonathan cv. and 25.1% on Golden Delicious cv.), for Bistrita area (Fig. 1). The main losses were due to evapo-transpiration (12.7-15.9% on Jonathan cv. and 16.6-21.5% on Golden delicious cv.). The losses due to the qualitative depreciation (storage disorders) were between 2.9-5.8% on Jonathan cv. and 0.5-3.6% on Golden delicious cv. Both, dry matter and soluble sugar, had an increasing trend lengthways harvest period, while the acidity had a decreasing trend. After six-month storage, the dry matter of fruits was not significantly changed. The sugar/acidity ratio was increasing lengthways harvest period and after six-month storage, too. The highest sugar/acidity ratio was found on fruits harvested in the period 8-11 October, at harvest and after storage time, too.

BIBLIOGRAPHY

