

CHANGES IN EPIPHYTIC MICROFLORA OF CHERRY FRUIT STORED AT NON-CHILLING AND CHILLING TEMPERATURES

Petya Ivanova^{1*}, Boryana Brushlyanova¹, Gabor Zsivanovits¹, Stoil Zhelyazkov¹

¹Institute of Food Preservation and Quality, Vasil Aprilov Blvd 154, 4003 Plovdiv, Bulgaria

*e-mail: p.ivanova@canri.org

Abstract

The choosing of the best storage condition of the sweet cherry play a very important role in reduction of the postharvest losses. The aim of this study was to evaluate the effect of non-chilling and chilling temperatures on changes in microbial population of cherry varieties with early and middle ripening time.

The batches of early ripen varieties: Bigarreau Burlat, Nalina, and Kosara, and middle ripen varieties: Rozalina, Vega, and Raynier were stored as non-chilled (climatic conditions) and chilled at 2-3 °C, relative humidity (RH) 86 - 90% during 3 and 9 days. Total aerobic plate count, coliforms, yeasts and molds followed by standard quantitative methods. Weight losses measured by weighing relative to initial weight. The relative weight losses and microbiological parameter were correlated with the storage time by regression analysis.

The losses relative to the initial weight and the total aerobic plate count, coliforms, yeasts and molds for each sample cherries during storage, regardless of the temperature, increased linear. The Pearson test of the correlations shows, resistance to microbial spoilage was affected by the decreasing temperature, but was also related to the difference in the varieties.

In conclusion the storage temperature could not be prioritized one or the other method and they should be implemented in practice.

Key words: *Sweet cherries, Postharvest storage, Microbiological indexes.*