## Abstract:

The peach (Flavorcrest and Red Top) and nectarine (Fantasia and Fairlane) cultivars used in this study were stored in normal (NA) and controlled atmosphere (CA) conditions [(CO2%:O2%) 3:3, 5:2, 10:2] consisting of 0±0.5°C temperature and 90±5% relative humidity in three years. Peaches and nectarines were subjected to some treatments (fungicide solution, low O2 and intermittent warming treatment) either before or during storage. Physical and chemical changes (weight loss, respiration rate, fruit flesh firmness, titratable acidity, total sugar, overall appearance) were recorded at 15-day intervals during 45 day storage and after 10 day shelf life at the end of the storage. The results show that fruits of cv. Flavorcrest were stored more successfully in 5:2, fruits of cv. Red Top in 5:2 and partially 10:2, and fruits of cvs. Fantasia and Fairlane in 10:2 atmosphere combinations, compared with other treatments.