

Title Pomological and Nutraceutical Properties in Apricot Fruit: Cultivation Systems and Cold Storage Fruit Management

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Citation Plant Foods for Human Nutrition (Formerly Qualitas Plantarum), 65, Number 2, 112-120, 2010

Keywords Carotenes; Integrated; Organic; *Prunus armeniaca* L.; Total antioxidant capacity (TAC); Total phenols (TP)

Abstract

We have investigated the effect of cultivation systems and fruit post-harvest management on the antioxidant properties of apricot fruits. Trees of five cultivars ‘Tyrinthos’, ‘Cafona’, ‘Bella d’Italia’, ‘Vitulo’ and ‘Pellecchiella’ were cultivated under integrated and organic systems. Fruits were collected at full maturity stage and analyzed either immediately or after storage at 4 ± 0.5 °C and 85% of relative humidity for seven and 14 days. The main pomological traits (weight, colour, flesh firmness, total soluble sugars, titratable acidity) and antioxidant properties were analyzed. The total antioxidant capacity (TAC by TEAC method), total phenols content (TP by Folin-Ciocalteu method) and carotenoid content by HPLC-DAD were monitored. Cultivar characterization by principal component analysis (PCA) indicated a large variability on pomological and antioxidant properties of apricot fruits. ‘Bella d’Italia’ showed better TAC and TP values compared to the other cultivars. ANOVA interactions between cultivar and cultivation system (organic/integrated) were found for the antioxidant properties. These interactions may help to select a set of genotypes with better performances under organic system, which in our study might be indicated in ‘Cafona’ and ‘Bella d’Italia’.

<http://www.springerlink.com/content/j3010h8410p22k43/fulltext.pdf>