

Postharvest Studies Beyond Fresh Market Eating Quality: Phytochemical Changes in Peach Fruit During Ripening and Advanced Senescence

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Abstract : Postharvest studies were conducted under the concept that fruit do not qualify for the fresh market may be used as a source of bioactive compounds. One peach (*Prunus persica* cvs Red June) were evaluated for their phytochemical content and antioxidant capacity during the ripening and over ripening periods (advanced senescence) for 12 and 15 d, respectively. Firmness decreased rapidly during this period from an initial pre-ripe stage of 5.85 lb/in² for peach until the fruit reached the fully ripe stage of lb/in². In this study we evaluate the varietal performance in respect of the quality beyond fresh market eating and nutrition levels. The varieties are (T-1 F-16-23), (T-2 Florda king), (T-3 Nectarine), (T-4 Red June). The result pertaining are there the highest fruit length (68.50 mm), fruit breadth (71.38 mm), fruit weight (186.11 g) found in T4 Red June and fruit firmness (8.74 lb/in²) found in T3-Nectarine. The acidity (1.66 %), ascorbic acid (440 mg/100 g), reducing sugar (19.77 %) and total sugar (51.73 %) found in T4- Red June, T-2 Florda King, T-3 Nectarine at harvesting time but decrease in fruit length (60.81 mm), fruit breadth (51.84 mm), fruit weight (143.03 g) found in T4 Red June and fruit firmness (6.29 lb/in²) found in T3-Nectarine. The acidity (0.80 %), ascorbic acid (329.50 mg/100 g), reducing sugar (34.03 %) and total sugar (26.97 %) found in T1- F-16-23, T-2 Florda King, T-1 F-16-23 and T-3 Nectarine after 15 days in freeze conditions when will have been since reached beyond market. The study reveals that the size and yield good in Red June and the nutritional value higher in Florda King and Nectarine peach. Fruit firmness remained unchanged afterwards. In addition, total soluble solids in peach were basically similar during the ripening and over ripening periods. Further research on secondary metabolism regulation during ripening and advanced senescence is needed to obtain fruit as enriched dietary sources of bioactive compounds or for its use in alternative high value health markets including dietary supplements, functional foods cosmetics and pharmaceuticals.

Keywords : metabolism, acidity, ascorbic acid, pharmaceuticals

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