

Title Cultivar and location of harvest affect postharvest peach fruit quality during ripening
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Abstract

Two peach cultivars 'Early Grand' (EG) and 'Florida King' (FK) grown under two different agro-ecological locations i.e. Sillanwali (SLW) and Soon Valley (SV) were evaluated for their fruit quality during ripening at ambient conditions ($30 \pm 1^\circ\text{C}$ and 60-65% RH). SV as a harvest location showed about 7%, 2%, 58% and 29% more fruit soluble solids contents (SSC), SSC: titratable acidity (TA) ratio, total phenolic (TP) contents and antioxidants activity (AA) than SLW during ripening, respectively. Peach cultivar FK showed about 2% SSC, 1 % SSC: T A ratio, 3% ascorbic acid and 22% TP contents higher in contrast to EG during fruit ripening. Whereas, fruit of EG exhibited 4% higher AA contents than FK during fruit ripening. At ambient conditions the fruit ripening was completed at day 4 of shelf irrespective of harvest location and cultivar. The interactive effect of cultivars and location remained significant with respect to SSC and AA contents of fruit. A gradual increase in SSC of peach fruit was observed during the ripening period however FK fruit exhibited highest SSC (13.8 °Brix) on day 4 of fruit ripening at SV. TA and SSC: TA did not show significant differences. Ascorbic acid contents showed an increase up to day 2 but later on tend to decrease at the end of ripening period irrespective of cultivars or location. TP content was highest (231 mg GAE 100 g⁻¹) in FK at SV on day 4 of fruit ripening while maximum AA (73% inhibition) were recorded in EG at SV on day 2 of fruit ripening. In conclusions, location of harvest has significant influence on the fruit quality and FK exhibited better fruit quality in terms of SSC, TP and AA contents at SV than EG at SLW.