

Title Differential effect of cultivar and harvest date on nectarine colour, quality and consumer acceptance

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Abstract

The influence of nectarine cultivar and the harvest date on fruit colour, fruit size, fruit quality parameters, and consumer acceptance were assessed. The analyses were carried on cultivars with different fruit taste (acidity and sweetness), from 5-years-old trees at the IRTA-Experimental Station of Lleida (Spain). The six cultivars were grouped in three pairs in which each had a similar commercial harvest date. Each pair comprised by a non-acid cultivar and an acid cultivar, except the pair of ‘Big Top[®]’ and ‘Mesembrine[®]’, which included two non-acid cultivars. The nectarines were harvested at 8 days intervals on five harvest dates, three of which were before the commercial harvest date, one at commercial harvest and another 1 week after commercial harvest.

On all of the harvest dates the non-acid cultivars always presented a more intensity of red skin colour than the acid cultivars, and they developed red colouration earlier. Compared to non-acid, acid cultivars showed also a greater differences in red colour between the exposed side and the shade side of the fruit. The evolution of fruit weight and of soluble solids content over the different harvest dates was similar for both groups of cultivars. Acid cultivars showed a significantly faster decrease in fruit firmness, especially evident in the case of early season cultivars as ‘Alice^{COV}’. The sugar-to-acid ratio of the non-acid nectarines was 2–3 times higher than with the acid cultivars. The consumer acceptance was always greater for non-acid than for acid cultivars, even at early or advanced stages of fruit maturity.