

Variability in peach and nectarine eating quality

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Abstract

Meeting consumers' expectations of peaches and nectarines is paramount for the Australian peach industry. Providing consumers with fruit that have consistently high eating quality is essential for repeat purchases and increasing per capita consumption. A major problem with meeting consumers' expectations is the variability among fruit within the same tray, as there can sometimes be large differences in fruit sweetness (soluble solids content, SSC). A first step towards solving this problem is to identify and quantify this variability in fruit SSC and then begin to identify some of the factors that influence SSC. The variability of fruit SSC was measured in a range of different peach and nectarine cultivars grown in different growing regions in Australia. Fruit SSC was measured non-destructively in the field and packinghouses with near infra red (NIR) spectroscopy. Fruit SSC and size (fruit diameter) was measured in a range of orchard and packinghouse surveys, which were conducted in each of the growing regions during the harvest period. The results show for the first time the range of fruit SSC within and between different growing regions and in the wholesale/retail market during the 2007/8 season. The results from the low and medium chill growing areas showed that there is tremendous potential to increase both the average SSC and to minimise fruit to fruit variability. The overall fruit SSC in the low chill and medium chill growing regions in the 2007 season was low. The fruit from the higher chill growing regions generally had higher fruit SSC, but there were still issues with low and variable SSC identified in the market and there was inter- and intra-tree variability. Fruit was also sampled at wholesale and retail markets and the variation in fruit SSC over the entire 2007/8 season was large.