

Abstract

The minimum RSSC needed to reach high consumer acceptance for peach and nectarine was determined by using 'in-store' consumer tests of low and high RTA melting flesh cultivars as a part of our program to develop minimum quality indexes. For 'Ivory Princess', a low acid, white flesh peach, 'Honey Kist', a low acid, yellow flesh nectarine, 'Elegant Lady', a high acid, yellow flesh peach, and 'Spring Bright', a high acid, yellow flesh nectarine, degree of liking and consumer acceptance were associated with ripe soluble solids concentration (RSSC) regardless of ripe titratable acidity (RTA). For the two high acid (0.70–0.90% RTA) cultivars tested, consumer acceptance increased rapidly as RSSC increased, reaching \approx 90%. In these cultivars, consumer acceptance reached a plateau and above which, it became insensitive to any additional increase in RSSC. For 'Elegant Lady' and 'Spring Bright', the plateau was reached at 11–12%, and 10–11% RSSC with \approx 90% consumer acceptance, respectively. For the low acid cultivars (0.30–0.50% RTA), 'Ivory Princess' and 'Honey Kist', consumer acceptance progressively increased as RSSC increased without reaching a plateau, and attained nearly 100% acceptance with RSSC of 16 and 15%, respectively.

For these low acid and high acid cultivars, consumer acceptance was closely related to RSSC but maximum consumer acceptance was attained at different RSSC levels depending on the cultivar. The fact that these cultivars reached high consumer acceptance with different RSSC levels indicates that a single generic RSSC quality index would not be reliable to assure consumer satisfaction across all cultivars.