

Abstract

'Blackamber' plum (*Prunus salicina* Lindell) consumer acceptance and market life were highly dependent on harvest date. For fruit within the most common industry ripe soluble solids concentration (RSSC) range (10.0–11.9%), ripe titratable acidity (RTA) played a significant role in consumer acceptance. Plums within this RSSC range combined with low RTA ($\leq 0.60\%$) were disliked by 18% of consumers, while plums with RTA $\geq 1.00\%$ were disliked by 60% of consumers. Plums with RSSC $\geq 12.0\%$ had $\approx 75\%$ consumer acceptance, regardless of RTA. Fruit harvested between 35.6 and 17.8 N had high consumer acceptance because of lower RTA and higher RSSC than earlier harvested fruit. Ripening plums before consumption decreased TA by approximately 30% from the TA measured at harvest. In some cases, this decrease in TA during ripening may increase the acceptability of plums that would otherwise be unacceptable.

Development of chilling injury (CI) symptoms limited market life of fruit harvested early (44.5–35.6 N) and late (17.8–13.3 N). Late harvested fruit were more likely to develop flesh translucency (overripe or bladderiness) when stored at 5 °C, whereas early harvested fruit had low consumer acceptance and were more prone to develop flesh bleeding/browning during storage at 0 or 5 °C.

Based on this work, 'Blackamber' plums are well adapted to late harvest but proper postharvest temperature management, including ripening, and marketing within its market life potential are necessary to avoid the onset of storage disorders and maintain flavor.