

Abstract

Consumer evaluation of "Hayward" kiwifruit with a wide range of dry matter content at-harvest has shown a higher liking by consumers for fruit with a high dry matter (high ripe fruit soluble solids content, rSSC) compared to fruit with a low dry matter (low rSSC). To examine fruit of intermediate dry matter, eight categories of dry matter (from <14 to >20% dry matter) were segregated using near infrared technology and evaluated by a consumer panel. The sensory attribute scores were examined for relationships with at-harvest dry matter and rSSC. The relationship between dry matter at-harvest and rSSC at sensory evaluation was: $rSSC = -3.755 + 1.057 \text{ dry matter}$.

Based on dry matter, sensory discrimination was only achieved between broad ranges, although the range was narrower at lower dry matter (<15%). For overall liking and flavour liking, there was no statistically significant difference in the range 15–20% and 16–20% dry matter, respectively. Based on rSSC, fruit could be segregated into three categories by their sensory scores, from which lower or upper thresholds for fruit preference could be established. Discarding fruit below 11% rSSC would remove poor flavoured fruit. Between 11 and 16% rSSC, fruit were scored high or low depending on individual consumer preference, or unidentified fruit components. Selecting fruit for >16% rSSC would reduce the probability of a poor flavour, however, many fruit in the 12–16% rSSC range had equally high sensory scores and hence there would not necessarily be the ability to discriminate between fruit above or below 16% rSSC. It is concluded that, given the wide range of consumer scores for fruit having equivalent rSSC, the benefit of segregating fruit based on dry matter (for rSSC) appears to be in reducing the risk of poor tasting fruit, whereas it is unlikely that high rSSC fruit will be perceived as having improved flavour by all consumers.