Objectives and Rationale

The objective of this study is to determine how dry matter content (DMC) is related to fruit quality, consumer acceptance and eating quality.

Methods

The objective of this study is to determine how dry matter content (DMC) is related to fruit quality, consumer acceptance and eating quality.

Key Results

Fruit samples collected at harvest, from 12 Bigbucks growing orchards in EGVV, showed a variation in mean fruit DMC from 13.2-16.5%. Individual fruit DMC showed a larger range of variation, from 10.2 to 20.1 %. Fruit DMC proved a more reliable predictor of total soluble solids (TSS) after 10 weeks air storage at 0.5°C+ a 7 days shelf life (R=0.51) than TSS at harvest (R=0.15). TSS samples after a 7-day shelf life had a significant relationship with DMC samples taken 1 to 2 weeks before commercial harvest. There was a significant relationship between DMC and firmness at harvest ($R=0.71$, $P < 0.05$), as well as Firmness after cold storage, although the relationship decreased ($R=0.66$, $P < 0.05$). No clear relationship between DMC at harvest and incidences of decay or disorders after cold storage and 7 days shelf life.

Discussion and Key Conclusion

DMC changed over time leading up to commercial harvest. It follows no consistent trend. A high level of variation exists within orchards and between orchards.

Fruit DMC measured at harvest or in the 2 weeks leading up to harvest can be used as an indicator of flesh firmness after storage. DMC and titratable acidity (TA) can be used as an indicator for the risk of disorder development during storage.