



DA Meter Maturity Indicator

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Recently, several devices to assist in determining some of the commonly used fruit quality parameters such as firmness, soluble solids content (SSC), titratable acidity (TA), dry matter content (DMC), and skin color have been introduced to growers in the Pacific Northwest and elsewhere. The Washington Tree Fruit Research Commission (WTFRC) Internal Program, under the leadership of Ines Hanrahan, has tested several such devices. This article is the fourth in the series describing these new devices.

The DA meter is a handheld device which non-destructively measures the difference of absorbance between 670 and 720 nm. The I_{AD} value correlates with the chlorophyll content in the mesocarp (flesh) of the fruit and can be used as maturity indicator of apples or pears.



Getting Started

The DA-meter requires a calibration before you start with the measurement.

- Place the disc with the white side facing to the lens and start the calibration, this step takes a few seconds.
- Once the calibration is complete you can start with the measurements.
- In order to reduce the variability of the reading, a visor should be attached around the lens (example of suitable visor shown below). Make sure that the visor does not block one of the lenses.
- The best results are obtained if duplicate measurements are made on

each fruit at the same time of day (Figure 1).

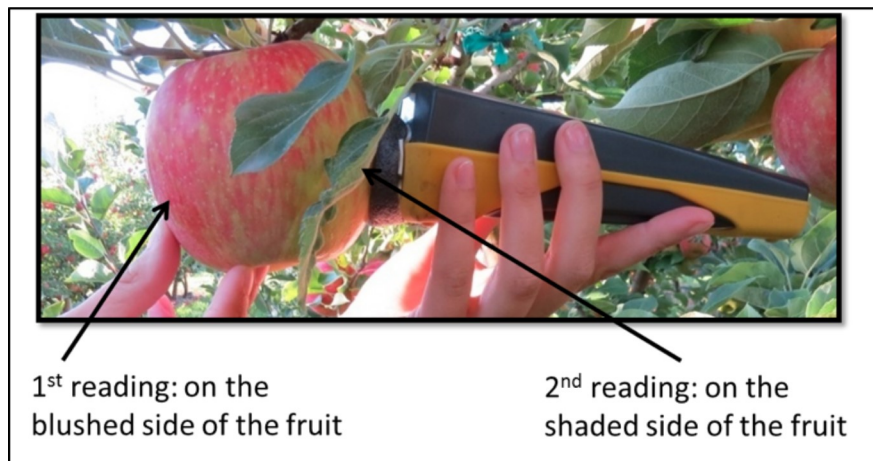


Figure 1: Duplicate measurements on each apple provide most consistent results

Note: In WTFRC trials we have found the DA meter to be a fast, non-destructive and reliable method to track maturity development of

Honeycrisp apples in orchards. We could also determine maturity spread within blocks, which may help growers decide how much fruit to pick in one pass. In our experience, and contrary to published literature, the DA values did not correlate closely to other maturity indicators.



Retrofitting a visor: A visor can be made by using a foam tube, double-sided foam mounting tape, and glue.

1. Cut out a piece of the foam tube by using scissors.
2. Add some glue around the foam tube piece.
3. Cut the double sided foam in small pieces and stick them on the glued site.

4. Stick the visor onto the DA meter.

Related articles

[New Tools to Help Determine Maturity of Tree Fruit](#)

[Felix F750 Maturity Test](#)

[Accuvin Titratable Acidity Maturity Test](#)

PAL-BX Acid Maturity Test

Link to Manufacturer

<http://www.trturoni.com/en/content/8-da-meter>

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