



Firmness and shelf life of Strawberries

Firmness is a good indicator and predictor of strawberry quality and shelf life throughout the chain. This is the main conclusion drawn from a project by Wageningen Food & Biobased Research carried out within the GreenCHAINge program. The findings offer fruit companies new opportunities to optimize the quality of their products and reduce food waste.

The four-year research program GreenCHAINge, successfully completed in 2018, developed a 'smart chain' that empowers fruit businesses to improve the intrinsic quality of on-sale fresh fruit. In Work Package 3 objective methods were developed that assess and predict the quality of soft fruit. These approaches enable the industry to take well-considered decisions on harvest time, storage and transport.

Immediately after harvest

This particular research project focused on establishing uniformly-high strawberry quality on the supermarket shelf, and quality prediction immediately after harvest. Quality was measured according to a common quality marker *decay-score**, which measures defects and bruising.

It was found that the lower the strawberry firmness, the higher the fruit decay score. The rate at which quality decreased depended on the specific cultivar but was the same throughout the season. Different ripening stages at harvest were also tested. The results showed that the rate at which quality decreased was similar to all ripening stages.

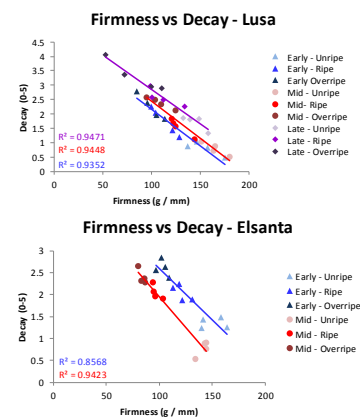
The firmness measurement proved to be applicable to a number of different strawberry cultivars. Bottom line is that firmness is a good indicator of the expected level of decay and may be used as marker to predict strawberry shelf life in the chain.

* *Fruit Decay Score Range: (0 = no bruises/damage, to 5 = severe rot/damage)*

Information

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"Firmness is an excellent indicator of the expected level of decay"



Relationship between firmness and fruit decay score. The upper graph shows the results for the cultivar Lusa and the lower graph for Elsanta.

For detailed information about this project result please visit www.wur.eu/greenchainge.





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