WAGENINGEN
UNIVERSITY & RESEARCH

Predict Mango quality by firmness

In GreenCHAINge an innovative "smart chain" is being developed. Overall goal is to improve the intrinsic quality of the product on the shelf.

Objective

Obtain uniform and RTE (Ready to Eat) mangos on the shelf. Determine the correlation of RTE mangos with "firmness". Predict quality by measuring the firmness at day of arrival.

Results

Measuring the firmness of > 3000 mangos at different time points between harvest, transport from Brazil to the Netherlands and ripening, in nine shipments between Nov '16 and Jan '17, shows that firmness is a parameter to predict the RTE stage of Mango cultivar Keitt and Kent. Firmness at "day of arrival" at importer correlates with firmness of RTE stage mangos.

A protocol to predict RTE stage is available for both Keitt and Kent mangos based on:

- Firmness at day of arrival.
- Ripening at 16°C or 20°C.

Conclusion

Delivering uniform and RTE mangos on the shelf is possible by selection based on firmness at day of arrival at importer.

Relevant for industry

Measuring firmness pre- and post-harvest allows prediction of firmness at RTE stage resulting in a reduced variation. More uniform products allow more efficient handling of the product, less waste and delivery of better consistent quality to the final consumer.

"Selection based on firmness to deliver more uniform mangos"
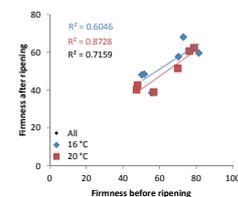
Acoustic-firmness before ripening is a good predictor for RTE-STAGE and useful to sort mangos before the ripening process.
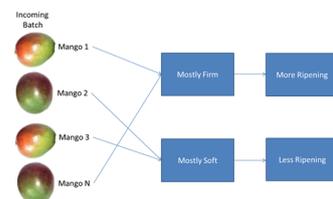
For detailed information about this project result please visit www.wur.eu/greenchainge.

GreenCHAINge

TOPSECTOR
TUINBOUW & UITGANGSMATERIALEN

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