



SmartFresh technology extends shelf-life, even when applied after storage

Using SmartFresh to extend the shelf-life of pears could be a valuable approach in fruit export, increasing customer satisfaction and bringing new markets within reach. This is the conclusion from a research project, by Wageningen Food & Biobased Research, under the umbrella of the GreenCHAINge project.

The GreenCHAINge project developed an innovative “smart chain”, with the overarching goal of improving the intrinsic quality of the product on the shelf. Work Package 5 focused on the export of pears to distant destinations, such as China. New insights continue to arise into the application of SmartFresh (1-MCP) technology, contributing to better post-harvest quality of products intended for distant destinations.

Both storage and transport

The scientists observed in experiments pears can be treated after an initial storage period, during a cold transport, instead of standard protocol after harvest, and still benefit from longer shelf life (firmness of pears). For this SmartFresh treatment during transport to be effective, a higher than usual dosage is needed. The duration of the storage period before treatment and transport appeared to affect treatment efficacy. The efficacy also varied per harvest season, as was also seen with pears treated following protocol after harvest.

Tailored approach

The results highlight the importance of tailoring the treatment protocol to the pear physiology and the circumstances. Insight into the maturity of stored pears, for instance via non-destructive ethylene measurements (PTR-TOF-MS), could provide guidance here.

“Storage period and dosage are crucial for successful application of SmartFresh after storage, to extend shelf life of Conference pears”

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

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