



## SmartFresh: effects on volatile production and taste of Pears

SmartFresh technology is increasingly used commercially on pears to help delay ripening. The effects of this emerging technology on pears' volatiles production are negligible in terms of customer taste experience. These are some of the outcomes of a research project, by Wageningen Food & Biobased Research, under the umbrella of the GreenCHAINge project. The findings highlight the added value of SmartFresh to extend shelf life and to facilitate increased export distances.

GreenCHAINge aims to develop a 'smart chain' that allows fruit businesses to improve the intrinsic quality of on-sale fresh fruit. Work Package 5 of the project focuses on the export of pears to distant destinations, exploring how SmartFresh's 'anti ripening' technology (1-MCP) could extend shelf life and improve post-harvest quality of, in this case, pears.

### Conference pears

Scientists conducted a number of experiments to understand how SmartFresh technology affects volatile (aroma) production in pears. Blind taste trials, with an untrained consumer panel, were also used. The researchers chose Conference pears, as this is the most-cultivated variety in the Netherlands.

### No taste difference

Pears treated with SmartFresh produced lower amounts of aroma volatiles (esters and alcohols). Amounts produced were measured non-destructively (using PTR-TOF-MS) on treated and untreated pears of comparable firmness. Between the two groups, taste panels found no difference in aroma or taste.

### *SmartFresh technology:*

- Increases export distance
- Extends pear shelf-life
- Improves post-harvest quality

while having negligible effects on taste of pears.

For detailed information about this project result please visit [www.wur.eu/greenchainge](http://www.wur.eu/greenchainge).

 GreenCHAINge



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