



New Project

TF 201

Improving quality and reducing costs
of Conference pear storage using
SmartFresh™

Project Number: TF 201

Title: Improving quality and reducing costs of Conference pear storage using SmartFresh™

Start and end dates: 1st August 2011 to 31st July 2013

Project Leader: Richard Colgan, Jim Mount Centre for Post-harvest Research

Industry Representative: Nigel Bardsley

Location: Produce Quality Centre (University of Greenwich), East Malling Research

HDC Cost: £32,066

Project Summary:

With the recent granting of a SOLA for SmartFresh™ on pears this project seeks to increase efficiency and reduce costs of Conference pear storage through the establishment of protocols for the use of SmartFresh™. Early experience with SmartFresh™ on Conference pear has found that pears often fail to ripen properly after removal from store and in some cases have lost their ability to respond to ripening cues. Nevertheless, subsequent experimental trials have indicated that by modifying storage temperature, or in the case of long-term storage, by reducing application rates, Conference pears retain their ability to ripen.

The strategies to be tested are; to store fruit at temperatures higher than currently recommended for the whole storage period and to assess the effects of exposure of fruit to low levels of external ethylene in conjunction with SmartFresh™ treatment.

The comparable effects of scrubbing ethylene during storage will also be tested using e+™ a new ethylene removal technology based on a palladium-promoted absorbent material. By increasing efficiency and reducing costs, this project will enable UK pear growers to compete with imports from mainland Europe where pear production is on a larger scale, and costs are correspondingly low.

Aims & Objectives:

(i) Project aim(s):

To improve fruit quality and reduce costs of Conference pear storage by using SmartFresh™. Key to achieving this aim will be the identification of protocols whereby pears retain their ability to ripen following SmartFresh™ treatment.

(ii) Project objective(s):

1. To identify an optimum method of SmartFresh™ treatment and storage for Conference pears.

1.1 To identify the optimum storage temperature following an application of SmartFresh™

1.2. To assess the effects of exposure of fruit to low levels of external ethylene in conjunction with SmartFresh™ treatment with a view to maximising the benefits of objective 1.1

- 1.3. To compare the effect of SmartFresh™ application with ethylene scrubbing during storage.
2. To quantify the economic benefits of the identified optimum method of post-harvest treatment and storage.
3. To disseminate results obtained through publications, the EMRA members day on fruit storage and training days where appropriate.

Further information

Email the HDC office (hdc@hdc.ahdb.org.uk), quoting your HDC number, alternatively contact the HDC at the address below:

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