



Horticultural  
Development  
Company

# New Project

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## TF 191

The effect of ethylene control strategies on the development of rotting in Bramley's Seedling apples

**Project Number:** TF 191

**Title:** The effect of ethylene control strategies on the development of rotting in Bramley's Seedling apples

**Start and end dates:** 1 April 2009 to 30 September 2011 (2 years, 6 months)

**Project Leader:** Dr Angela Berrie, East Malling Research, East Malling, Kent

**Project Co-ordinator:** TBA

**Location:** Commercial holdings TBA

## **Background and project objectives**

The development of fungal rots in CA-stored Bramley's Seedling apples is a major problem for growers. It is not uncommon for losses to reach 10% of the stored crop late in the storage season and exceptionally losses as high as 20% have been reported. Much of the rotting is caused by *Nectria galligena*, the fungus that causes apple canker in the orchard. There is a need to reduce the losses associated with rotting in Bramley apples. Although individual growers are assessing the various strategies available to do this, they are not able to compare their effectiveness under various conditions.

Currently there are three technologies that may impact on rot development, all of which are concerned with controlling the levels or action of ethylene. The aim of the project is to compare the effects of the three technologies; 'SmartFresh™' (1-MCP), 'Bi-On' (ethylene absorbant) and 'Biofresh' (ozone generator) on the development of fungal rots in CA-stored Bramley apples under commercial conditions. Several growers are already testing these three storage strategies. However, there are very few instances where more than one technology is being tested under comparable conditions, or where a technology is being compared to a "control" store with no treatment. The approach of this project is to exploit the existing trials and to maximise the information that can be obtained by:

- Providing technical support and manpower for any existing trials, for assessment of rotting in terms of quantification of wastage due to rots and correct identification of the causal pathogens.
- Increasing the opportunities for direct treatment comparisons within commercial stores by distributing bins of fruit from selected growers to stores undergoing a range of treatments.
- Introducing fruits artificially inoculated with *Nectria* to enable a direct assessment of the effects of ethylene removal on fungal growth

Further information

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

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