



Horticultural
Development
Company

New Project

TF 193

Sustainable management of
storage rots of apple

Project Number: TF 193

Title: Sustainable management of storage rots of apple

Start and end dates: 1 February 2009 to 30 April 2011 (2 years, 3 months)

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

Project Co-ordinator: TBA

Location: EMR & commercial holdings TBA

Background and project objectives

Fungal rots can result in significant losses in stored apples, particularly in fruit stored beyond January, and increase grading costs. Successful control of storage rots depends on a clear understanding of the rots to be controlled. The current strategy is based on rot surveys from the 1990s when *Nectria*, *Botrytis*, brown rot, *Penicillium*, *Phytophthora* and *Gloeosporium* were identified as the main rots in apple but since then the rot profile may have changed. Rot trials in orchards at EMR have indicated an increase in incidence of rots such as *Botryosphaeria* sp., *Phomopsis* sp. and *Colletotrichum* sp. in stored fruit. Whether these are also of increased prevalence in commercial orchards is not known, but it is important to know their incidence as rot control strategies may need to be modified. Growers often report increased rots during fruit grading but rarely identify the rots present

2008 was exceptionally wet from blossom to harvest and consequently produced a particularly high risk for rot infection of apple. This provides the opportunity to re-evaluate rot incidence and to assess the success of the current rot control strategy on commercial farms. The aim of this project is to develop a sustainable, cost effective system for control of storage rots. This will be done by:

- Identifying the main rots responsible for losses in stored Cox apples by visiting packhouses when fruit is being graded and identifying the rots present. This will establish whether the rot profile in apple orchards has changed compared to previous surveys in the 1990s and whether rot control strategies need to be adjusted.
- Secondly, spray timing for rot control will be evaluated in a large plot orchard trial. Treatments applied at blossom time will be compared with treatments applied pre-harvest only and at both timings. An additional treatment based on sprays at blossom time only combined with cultural methods of control (selective picking) at harvest will also be included. This will establish whether fungicide treatments pre-harvest give any additional control of rots or whether such treatments are of no benefit and therefore could be avoided minimising the risk of residues in the fruit.

Further information

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

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