



Agriculture & Horticulture  
DEVELOPMENT BOARD



# Grower Summary

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## TF 172b

Evaluation and development of  
new rootstocks for apples –  
new work on new plantings

Annual 2013

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Before using all pesticides check the approval status and conditions of use.

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## **Further information**

If you would like a copy of the full report, please email the HDC office ([hdc@hdc.ahdb.org.uk](mailto:hdc@hdc.ahdb.org.uk)), quoting your HDC number, alternatively contact the HDC at the address below.

HDC  
Stoneleigh Park  
Kenilworth  
Warwickshire  
CV8 2TL

Tel – 0247 669 2051

HDC is a division of the Agriculture and Horticulture Development Board.

**Project Number:** TF 172b

**Project Title:** Evaluation and development of new rootstocks for apples – new work on new plantings

**Project Leader:** Gary Saunders

**Contractor:** East Malling Research

**Industry Representative:** Peter Checkley, Howard Chapman Ltd

**Report:** Annual Report 2013

**Publication Date:** 04 July 2013

**Previous report/(s):** TF 172 Final Report

**Start Date:** 01 May 2012

**End Date:** 30 April 2016

**Project Cost:** £41,992

## Headline

- Nine Canadian apple rootstock selections have been obtained for evaluation with a combination of Gala and Braeburn scions and three *Pyrus* and four quince pear rootstock selections for pear have been taken forward for evaluation after budding with Conference.

## Background and expected deliverables

A review of HDC-funded rootstock research projects (Project TF 158) acknowledged that there was a strong need for new or improved rootstocks for apples, pears, plums and cherries that are dwarfing, precocious, high yielding and offer some measure of drought tolerance. The report recognised that rootstocks are a vital part of the currently used growing systems for tree fruits but those currently used in tree fruit production have been grown for decades and all have some limitations. Breeding programmes in the UK and abroad have generated a number of promising rootstocks in recent years which are becoming increasingly available to growers. The TF 158 report recommended that UK trialling of promising UK and overseas material should continue and that technology transfer should be improved. This work was then undertaken in HDC project TF 172 (*Evaluation and development of new rootstocks for apples, pears, cherries and plums*).

This new project is a continuation of HDC project TF 172 but focuses only on apple and pear rootstocks. The main aim of the project is to acquire, evaluate and develop (in UK growing conditions), new apple and pear rootstocks produced by breeding programmes both at EMR and abroad. This project provides continuity of the trialling of fruit tree rootstocks at EMR - in apple looking for rootstocks of intermediate vigour between M27 and M9 and a replacement for M26, and in pear a rootstock with increased dwarfing using quince or preferably *Pyrus*.

Selection and release of improved rootstocks to the industry will be of benefit as the introduction of new rootstocks with increased precocity and yield with fewer requirements for chemical or mechanical growth control will have a huge impact on the profitability of UK orchards.

## Summary of the project and main conclusions

Nine selections of Canadian apple rootstocks, selected for winter hardiness, disease resistance, dwarfing habit, precocity and ease of propagation, were obtained and grafted with Braeburn and Gala. The selections were from a breeding programme initially in Morden, Manitoba then transferred to St-Jean-sur-Richelieu, Quebec and comprised: SJM15,

SJM127, SJM167, SJM188, SJM189, SJP84-5217, SJP84-5231, SJP84-5162 and SJP84-5174. These were grafted alongside M9, M26, M27 and MM106.

Pear rootstocks were propagated from seven promising selections from the East Malling Rootstock Club, three of which were *Pyrus* and four of which were quince. Budding will be carried out on those selections successfully propagated to produce trees for evaluation.

### **Financial benefits**

It is too early in the project for any financial benefits to be apparent, although a selected *Pyrus* rootstock would be of great benefit to the industry as this would overcome many incompatibility problems and remove the need for an interstock.

### **Action points for growers**

- There are no action points at present.