

Grower Summary

TF 172b

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

Annual YYYY

Disclaimer

While the Agriculture and Horticulture Development Board seeks to ensure that the information contained within this document is accurate at the time of printing, no warranty is given in respect thereof and, to the maximum extent permitted by law the Agriculture and Horticulture Development Board accepts no liability for loss, damage or injury howsoever caused (including that caused by negligence) or suffered directly or indirectly in relation to information and opinions contained in or omitted from this document.

©Agriculture and Horticulture Development Board 2015. No part of this publication may be reproduced in any material form (including by photocopy or storage in any medium by electronic mean) or any copy or adaptation stored, published or distributed (by physical, electronic or other means) without prior permission in writing of the Agriculture and Horticulture Development Board, other than by reproduction in an unmodified form for the sole purpose of use as an information resource when the Agriculture and Horticulture Development Board or AHDB Horticulture is clearly acknowledged as the source, or in accordance with the provisions of the Copyright, Designs and Patents Act 1988. All rights reserved.

The results and conclusions in this report may be based on an investigation conducted over one year. Therefore, care must be taken with the interpretation of the results.

Use of pesticides

Only officially approved pesticides may be used in the UK. Approvals are normally granted only in relation to individual products and for specified uses. It is an offence to use non-approved products or to use approved products in a manner that does not comply with the statutory conditions of use, except where the crop or situation is the subject of an off-label extension of use.

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

Read the label before use: use pesticides safely.

Further information

If you would like a copy of this report, please email the AHDB Horticulture office (hort.info.@ahdb.org.uk), quoting your AHDB Horticulture number, alternatively contact AHDB Horticulture at the address below.

AHDB Horticulture,
AHDB
Stoneleigh Park
Kenilworth
Warwickshire
CV8 2TL

Tel – 0247 669 2051

AHDB Horticulture is a Division of the Agriculture and Horticulture Development Board.

Project Number: TF 172b

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

Project Leader: Gary Saunders, East Malling Research
(up to March 2014)
Felicidad Fernández, East Malling Research
(from April 2014)

Contractor: East Malling Research

Industry Representative: Peter Checkley, Howard Chapman Ltd.,
Broadwater Farm, Broadwater Lane, West
Malling, Kent, ME19 6HT

Report: Annual report 2014

Publication Date: 10 July 2015

Previous report/(s): TF172 final report August 2012

Start Date: 01 May 2012

End Date: 30 April 2016

Project Cost: £41,992

GROWER SUMMARY

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 are being propagated for evaluation with 'Conference'

Background and expected deliverables

A review of AHDB Horticulture-funded rootstock research projects (project TF158) 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 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 AHDB Horticulture project TF172 (*Evaluation and development of new rootstocks for apples, pears, cherries and plums*).

This project is a continuation of AHDB Horticulture project TF172 but focusing only on apple and pear rootstocks. The main aim of the project is to acquire, evaluate and develop new apple and pear rootstocks in UK growing conditions, which are produced by breeding programmes both at EMR and abroad. This project provides continuity of the trialling of fruit tree rootstocks at EMR, looking for rootstocks of intermediate vigour between M27 and M9 and a replacement for M26 in apple, 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. The introduction of new rootstocks with increased precocity and yield and 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 grown on following grafting with 'Braeburn' and/or 'Gala'. The trees for trial have been selected and will be planted in 2014. The selections were from a breeding program 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.

Seven promising rootstock selections (three *Pyrus* and four quince) from the East Malling Rootstock Club are being propagated for trial with Conference.

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.