

Grower Summary

TF 172b

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

Annual 2015

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Further information

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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

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(up to March 2014)
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(from April 2014)

Contractor: East Malling Research

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Report: Annual report 2015

Publication Date: 07 July 2015

Previous report/(s): TF 172 Final report 2012

Start Date: 01 May 2012

End Date: Due 30 April 2016 but was merged into TF 224 on
30 March 2015

Project Cost: £41,992

GROWER SUMMARY

Headline

- Five *Pyrus* and two quince pear rootstock selections for pear from the EMR programme are being propagated for evaluation with 'Conference' in a trial due to be planted in 2016.

Background and expected deliverables

A review of AHDB Horticulture-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 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 TF 172 (*Evaluation and development of new rootstocks for apples, pears, cherries and plums*).

This project is a continuation of AHDB Horticulture project TF 172 but focuses only on apple and pear rootstocks. The main aim of the project was 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 provided 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 for pears a rootstock with increased dwarfing using quince or preferably *Pyrus*.

Selection and release of improved rootstocks to the industry will be of benefit to growers 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, that had been grafted with 'Braeburn' and/or 'Gala' scions, were planted in a field trial in August 2014. The selections

came 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.

Seven promising rootstock selections (five *Pyrus* and two quince) from the East Malling Rootstock Club (EMRC) are being propagated for trial with Conference in 2016.

Although this project is being terminated a year earlier than planned, both trials will continue and form part of a new project that will integrate these trials with the activities for the EMR rootstock breeding programme project (TF 182). The new project (TF 224) was agreed by the AHDB Horticulture Tree Fruit Panel in March 2015 and started on 1 April 2015.

Financial benefits

It is too early in the project for any financial benefits to be apparent. 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 inter stock. New apple rootstock material from overseas may have the potential to be useful to UK growers.

Action points for growers

- There are no action points at this stage of the project.