

Grower Summary

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 the full 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 207 |
| Project Title: | Determination of the optimum pruning time for fruit wall orchard systems for Gala apple |
| Project Leader: | Tim Biddlecombe Farm Advisory Services Team LLP. Brogdale Farm Brogdale Road Faversham Kent ME13 8XZ |
| Contractor: | FAST LLP |
| Industry Representative: | Mark Holden Adrian Scripps Ltd Moat Farm Five Oak Green Tonbridge Kent TN12 6RR |
| Report: | Annual Report 2015 |
| Publication Date: | September 2015 |
| Previous report/(s): | Annual Report 2014 Annual Report 2013 |
| Start Date: | 1 st March 2012 |
| End Date: | 31 st March 2017 |
| Project Cost: | £38,826 |

Headline

Two years into this pruning trial, trees are beginning to react to their different pruning treatments.

Background and expected deliverables

The fruit wall concept originated in France in 1986 where the system's potential to reduce pruning costs and increase yields was demonstrated. As UK growers consider adopting the fruit wall system, this trial aims to establish the optimum time to make the pruning cut. The timing of the cut determines the amount of vegetative regrowth and also whether the bud behind the cut becomes floral or remains vegetative. Determining the optimum time to perform the pruning cut will help to achieve maximum productivity from the fruit wall system. The impact of the timing of pruning on the yield, fruit quality and vegetative regrowth are being assessed. The trial is being conducted over five years to assess the long-term effects of the treatments.

The trial was established to determine the optimum time to mechanically prune orchards planted as a fruit wall compared to a winter hand pruned control, and to establish the effects of inter tree pruning. The five year trial established in 2012 is laid out in an existing commercial orchard of dessert apple variety Gala (clone Galaxy). 2014 was the third year of timed pruning treatments.

Summary of the project and main conclusions

The project is designed to test the effect of four timings of pruning a fruit wall mechanically compared to a winter hand pruned control. In addition, a further set of treatments is being imposed to compare the effect of pruning between the trees by hand during the dormant period.

The pruning timings are based upon different growth stages: pink bud, 6 new leaves, 9 new leaves and 12 new leaves (or when 50% terminal buds were present).

As in previous years the winter and early season cuts produced the strongest regrowth in 2014 (approximately 25cm) and the latest timing the least regrowth (approximately 4cm).

There were no statistically significant differences in yields between the treatments in 2014 but the winter hand pruned control still had the highest cumulative yield. Small benefits in yield and quality in the plots with hand pruning between the trees are showing up but these were not significant. Small benefits in fruit size and sugar were recorded in the plots pruned at pink bud but these again were not statistically significant.

No differences were recorded in fruit colour or maturity between the treatments.

Financial benefits

If a system based mainly on mechanical pruning proves to be successful with minimal reduction in the yield of class I fruit, it holds the prospect for reducing the cost of pruning and for the need for skilled pruning labour. Both of these considerations are important for growers in the current conditions.

Action points for growers

It is important to “read the tree” before deciding on the timing of pruning. Where limited regrowth and improved fruit bud formation are required, pruning at the 9 leaf stage appears to be the optimum.

Where trees are not vigorous and are in balance, pruning at the pink bud stage may benefit fruit size and sugar content, but will encourage more growth.