Focus Orchard Trial: Can growth of Gala on M26 be kick-started?

Orchard: Favaro Orchards  
Orchardist: Simon Favaro  
Prepared by: Stephen Tancred, Orchard Services.

Trial details

Variety: Royal Gala apples on M26 rootstock  
Trees spacing: 3.6 X 1.0 m = 2,778/ha  
Tree height: 2.4 m  
Replant situation, but good soil preparation done  
4-wire trellis installed in year 2

2008-09 Trees planted  
2010-11 Not cropped as frosted  
2011-12 Medium crop  
2012-13 Full crop of 38 t/ha

Trees have not grown as well as expected and have yet to fully fill their canopy. Very little new growth in 2011-12 season.  
Ideally would want another 0.5-0.7 m on top of the trees and more lateral branch development in the top half of the tree.  
Aim of trial was to see if growth could be kick-started to enlarge the canopy and cropping potential.

All trees received the usual fertiliser program but some received an extra 250 kg/ha calcium nitrate split into seven ground applications.  
Fruit was removed from in late October by hand.  
Season was wetter than usual and considered good for tree growth.
<table>
<thead>
<tr>
<th>Treatment</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>1</td>
<td>Untreated</td>
</tr>
<tr>
<td>2</td>
<td>Fruit removed from entire tree</td>
</tr>
<tr>
<td>3</td>
<td>Fruit removed from top 1/3 of tree</td>
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<tr>
<td>4</td>
<td>Fruit removed from top 1/3 of tree prune leader</td>
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<tr>
<td>5</td>
<td>regular Cal Nitrate</td>
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<tr>
<td>6</td>
<td>Fruit removed from entire tree regular Cal Nitrate</td>
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<tr>
<td>7</td>
<td>Fruit removed from top 1/3 of tree regular Cal Nitrate</td>
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<tr>
<td>8</td>
<td>Fruit removed from top 1/3 of tree prune leader regular Cal Nitrate</td>
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**Total length of new shoots/tree (mm) 2012-13**

**Observations**

- Fruit removal and extra fertiliser had a greater impact on increasing the amount of new annual growth. Pruning the leader not very effective.
- Overall level of growth was low and no treatments had the result of kick-starting the trees.
- More new growth occurred in the bottom half of the trees than the top, even when fruit was just removed from the tops of trees.
- Conclusion is that once M26 switches from a vegetative to a cropping stage, it is hard to kick start growth again. May have been better to delay cropping another year and fill the canopy.
Trees in winter – very little pruning to do

Trees with crop removed – new growth visible