FOCUS ORCHARD UPDATE NOVEMBER 2019

BATLOW AND ORANGE

Prepared by Nic Finger, AgFirst

ACKNOWLEDGEMENTS

The ongoing creation, maintenance and monitoring of these orchard blocks is made possible due to the ongoing participation of the Focus Orchard growers across Australia and the Front-Line Advisors who support them.

Special thanks to the team at Seven Springs (Darryl, Caroline and Dom), Kevin Dodds (NSW DPI), Ian and Prue Pearce (Stoneleigh) and Jessica Fearnley (NSW DPI) for their assistance with data used in this article.

BATLOW – SEVEN SPRINGS

Block profile: Alvina Gala Block 1

**Figure 1** Alvina Gala block 1 during winter 2019 (left) and early November 2019 (right)

<table>
<thead>
<tr>
<th>Variety:</th>
<th>Alvina Gala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rootstock:</td>
<td>M9</td>
</tr>
<tr>
<td>Row spacing:</td>
<td>4.0m</td>
</tr>
<tr>
<td>Tree spacing:</td>
<td>1.2m</td>
</tr>
<tr>
<td>Other details:</td>
<td>Planted winter 2014 (6(^{th}) leaf)</td>
</tr>
<tr>
<td>History:</td>
<td></td>
</tr>
</tbody>
</table>

- Block was not fumigated at planting; slow progress possibly linked to specific apple replant disease (SARD)
- Irrigation scheduling has been altered in the last 12 months from standard scheduling to being based off tensiometer readings (GDot)
Results to date

Tree growth over last 12 months has significantly improved. This is most noticeable in branching area filled with a shift from 60% of branching space (wires 1 to 3) moving to 80% of branching space being filled on average (wires 1 to 4). The block still contains a significant number of weaker trees which will continue to require additional strategies to promote growth and reduced croploading to reflect their size/cropping potential.

Key strategies from here

Managing weaker trees to maximise block uniformity is critical in this block.

This may include:

- Additional spur pruning (i.e. running a lower fruit per bud ratio on weak trees)
- Composting/mulching of weak trees
- Earlier thinning to maximise growth
- Continue using soil moisture monitoring to inform irrigation decisions
Block update: Fuji Block 6 – 2019 harvest Results

Fuji block 6 was reported on in a previous article (see the Future Orchards Library on APAL website; NSW May 2019 update).

To jog your memory:
- 50t/ha target was set to achieve a per tree fruit count of 293 at hand-thinning (targeting 190g average fruit size)
- A late-January fruit count revealed 553 fruit per tree post-thin

2019 harvest results and return bloom:
- The end result was a 96t/ha crop with a significant colour challenges
  - Extremely heavy croploads for the tree structure
- Marketing options for this older strain of Fuji were relatively limited
- Return bloom for 2020 would be rated as non-existent to poor

![Figure 3](image.jpg)

**Figure 3** Fuji block 6 gross production for 2014 – 2019 as gross and class 1 kilograms per hectare.

1.1 Fuji Rosy Glow Block 6 – Graft 2019

Given the 2019 harvest results and historical challenges with the block the return bloom was somewhat expected with a poor result at the start of the season. As a direct result of return bloom evaluations, and another poor result inevitable, the decision was made to graft the block (relatively late) to Rosy Glow. This decision was made rapidly with chainsaws in within 5 days with time of the essence grafting outside optimal conditions (later than ideal).
A late graft (end of October) is more risky than earlier grafting but nurse limbs above a step graft were left to stem sap flow. Additional strategies that could be used include scoring the trunk (typically 50% of circumference over 30cm trunk height on a diagonal below the graft) and root pruning aggressively on one side. Whilst an early bark graft typically has greater success rates (when bark can only just be lifted is an ideal start point), these strategies can help to maximise graft-take where excessive sap flow is expected.

Figure 4 Step graft was used below nurse limb. Nurse limb was used given late October/early November graft timing.

Figure 5 Block 6 November 2019 with step graft (Fuji branches retained as nurse limbs given late graft timing).
Block profile: Bravo planting 2017

Variety: Bravo™ (ANABP 01)
Rootstock: M9
Row spacing: 3.5m
Tree spacing: 1.5m
Other details: Planted winter 2017 (Third leaf)

History:
- At planting had intensive compost applied to root zone which has potentially slowed tree growth (root burn?)
- Poled at end of first leaf
- Some variability across the block with various trunk sizes and heights. This is generally graded across the block with different strong/weak zones.

Plan for 2020 harvest season:
- A light crop will be carried on this block to produce 6-8 t/ha
- Cropload will be set for each size of tree based on cross sectional area at ~5 fruit/TCA
- This is aimed to help reduce vigour in basal branches rather than stringing (fruit weight will bend)

Figure 6 Stoneleigh’s Bravo™ block in winter 2019.
2019/20 Trial – Effect of mulch on young Bravo™

Trials in both Orange and Batlow are completed and managed by the NSW DPI team in conjunction with the Focus Orchardists in NSW.

For the 2019/20 harvest season a series of mulch treatments will be applied to an area of this block at different rates. In doing so, it is hoped that any differences in tree vegetative growth (trunk circumference, tree height, extension growth) can be measured to provide some recommendations around effective mulching rates for young trees, particularly in relation to tree growth.

A blend of 80% chipped pine and 20% compost was used as the standard mix in all treatments.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Details</th>
<th>Rate</th>
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<tbody>
<tr>
<td>1</td>
<td>No mulch</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Half prescribed rate</td>
<td>24m³/ha</td>
</tr>
<tr>
<td>3</td>
<td>Prescribed rate</td>
<td>58m³/ha</td>
</tr>
<tr>
<td>4</td>
<td>Double prescribed rate</td>
<td>116m³/ha</td>
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</tbody>
</table>

Results of the trial will be discussed at the winter 2020 Focus Orchard walks with the final report uploaded to the Future Orchards Library on the APAL website upon completion.

![Image of pine mulch under apple trees in South Africa](image-url)

Figure 7 Pine mulch under apple trees in South Africa. This strategy has gained popularity there for water retention, particularly in younger trees.

Keep an eye on all Focus Orchard block progress through OrchardNet using the focus orchard login (username: focus password: focus) and demonstration trial updates on the APAL website.