Future Orchards

Business Development Group Update

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PREPARED BY NIC FINGER, AGFIRST

IN THIS ISSUE

Last issue we looked at fruit sizing and some of the data that is worth collecting over the harvest period. One of my main points regarding harvest data collection was trying to ensure that you're collecting your data to a management unit level (i.e. a block) where possible. It's very difficult to target key areas for improvement if you don't understand where the biggest potential gains can be made.

Whilst harvest is a very busy time, ensuring good data capture now leads to simpler and faster decisions later in the year.

Taking a few minutes to look at your trees and assess what has and hasn't worked this year can make significant differences to your block outcomes in the coming and subsequent seasons. These visual assessments (write notes!) can be invaluable when it comes to planning tasks for the next 6-12 months.

A simple list of each block with your objectives for vigour status, fruit size and fruit quality (e.g. more colour) can make pruning prioritization and scheduling significantly easier. With the addition of a few notes on likely return bloom (e.g. on-

year or off-year coming) you'll have a great headstart on your upcoming pruning and staffing requirements.

- Nic

Interested in trying out OrchardNet?

You can take a look by logging into your own account or by looking at the Focus Orchard block details (Username: focus password: focus)

If you've forgotten your OrchardNet login then go to the website and click the 'Lost your password?' link.

http://www.orchardnet.co.nz

Don't have an OrchardNet account?

As part of the Future Orchards project OrchardNet is provided to Australian growers for free (up to 1200 blocks total). Please contact your local FLA or a member of the AgFirst team (see details on the last page of this newsletter) if you would like to give it a go.

Planning for harvest 2020

Prioritising pruning/training tasks

Planning for harvest 2020 – start now with notes

The reality is you've already made, or not made, several decisions that will positively or negatively influence next year's crop already. Start thinking now about winter and spring management (whilst you can still see what has and hasn't worked) to maximise next year's crop.

Recovery of fruit this harvest

If you're consistently seeing 15%+ of your crop left on the tree it's time to ask why.

Is it shading? Poor genetics? Not enough labour to get the crop off? Summer conditions?

It's likely that several factors are influencing the outcome. A quick 5-minute walk in a block between-picks and once finished harvest can give great insight into areas for improvement.

Return bloom

If a light bloom is expected it may be worth holding off pruning until blossom when it becomes much clearer what is and isn't going to result in fruit. The bonus of this strategy is the devigorating effect on a potentially biennially off-tree. Heavy pruning in winter on a tree with limited floral buds will likely result in an extremely difficult to manage tree with a lot of vegetative growth.

For blocks with mixed biennial bearing habits, going through prior to harvest and painting/marking a particular type of tree (e.g. off trees get a white dot) can ensure they're handled differently when it comes to pruning and other orchard tasks.

Desired vigour status

Is the current tree vigour where you want it? Depending on your goals pruning during dormancy or next spring during bloom can have very different effects.

This fruit didn't make it to the bin. Why? How do we prevent the issue next year?

Block Profitability

Blocks that are consistently poor performers must be carefully evaluated. If the block returns are no longer economically sustainable reworking or removal may be the best option.

If you cannot identify that one block is more profitable relative to another you need to consider altering your systems to allow better monitoring of this.

Identifying bin numbers harvested per block, recording % unrecovered

fruit or juice picked, running fruit as separate lines at the packhouse (this one can be difficult to achieve; never hurts to ask) and an overhaul to your costs/returns tracking can provide the much-needed data to assist decisions around variety, block or system changes. There'd be nothing worse than removing a block because you felt it wasn't performing to later find it was consistently outperforming another on profitability.

Estimated block profitability can be determined in OrchardNet with gross volume picked, packout (estimate something sensible if you don't have the data yet), average fruit weight and a block's planted area and can be accessed free as part of the Future Orchards project.

See previous Business Development Newsletters for more information on how to perform block profitability analysis on the Future Orchards Library: https://apal.org.au/industry-info/future-orchards/archive-library/#bdpl.

It is important to remember that costings within OrchardNet are based on average costs and returns as determined in the Orchard Business Analysis; your cost/return structure may vary greatly.

Prioritising pruning

Almost all farmers are exceptionally good at managing their staff throughout the year (and particularly when under the pump at harvest). Whilst harvest order is typically well establish; pruning and thinning order can change quite dramatically each year. Using a robust set of notes, planning these tasks out immediately after harvest will give a great roadmap for the tasks ahead.

Collection

As I've outlined above, collection of some data whilst trees are still in leaf can be a good starting point for planning in winter. Couple this with your harvested bin totals and some estimated or actual packhouse data and we've got a reasonably powerful dataset to discuss, fine-tune and develop a strong plan for the year ahead.

Evaluation

Before everyone takes a much-needed break following harvest, a meeting of the orchard management and operations team to discuss the plan for each block can be a great way to ensure everyone is on the same page.

Debating pruning timing and style prior to the day can be a good way to ensure a good outcome for the block. Where contractors will be used, having a clear set of instructions/goals for the block will be a good starting point to ensuring the job you want is what you get.

I'd suggest at least 5-10 minutes for each block discussing:

- 2019 results (compare to previous years if available)
  - Fruit size
  - Colour
  - Maturity
  - Yield
  - Recovery %
- Positives for the block
- Negatives for the block
- Goals for 2020
  - Keep it realistic
- Return bloom expected
  - Light
  - Heavy
  - Average
- Bud strength
  - Weak
  - Average
  - Strong
- Timing of pruning
  - Postharvest
  - Winter
  - Spring
- Level of pruning
  - Minimal
  - Moderate
  - Mixed
- Do any trees need to be managed differently?
- Do areas within the tree need different pruning?
  - Tops
  - Bottoms
- How many branches require removal per tree?
  - Where are they? Top/bottom

A standardized sheet for each block can be a great way to ensure each point is being discussed (as well as any extra categories for your orchard) and then save it for reference.

Implementation

Once a number of variables for the block are considered its time to simplify it all down to a few key rules. Anything more than 3 or 4 things on a single pass is starting to get confusing.

Where you're managing tree differently (eg. painted off-trees with a dot) I'd suggest running it as two passes. There can be benefits in delaying the pruning of off-trees until spring when flower can be seen and pruning strategy adjusted as needed.

I've got an example on the next page of a pruning plan. I'm wanting 85t/ha at 180g average fruit size.

Adaptation

As with all activities on the orchard consistent monitoring and making necessary adjustments are key to ensuring tree uniformity, crop consistency and improvements within the orchard.

Bud counting, as discussed in a previous issue, can be an effective way to monitor and objectively look at pruning requirements within trees. To see my past article on cropload target setting in relation to bud counts see: https://apal.org.au/wp-content/uploads/16BDG-Newsletter-April2-2018.pdf

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Orchard Pruning Plan Recording Sheet

Assessment Date: 1 / 6 / 2018   Assessed by: NF   2777

Orchard: Example   Block: —   Trees/ha: 2208

Variety: Gala

	Last year	This year
% of full canopy (this block)	95 %	100 %
Target gross yield (t/ha)	80 t/ha	85 t/ha

Biennial Cropping Pattern   Even ☒   Biennial on ☐   Biennial off ☐   Mixed ☐

Target fruit per tree 170   Target fruit buds per fruit 1.3   Target fruit buds per tree 221

Target branches for tree 22   Target fruit buds per TCA NA

Optional

Target fruit per BCA _____   Target fruit buds per BCA _____   Target total BCA for tree _____

Initial assessment (pre-prune)

Required Vigour Status (canopy)	More ☐	Less ☐	Same ☒	
Visual fruit bud quantity	Poor ☐	Normal ☐	Excellent ☒	Excessive ☐
Within tree areas of concern	Top ☒	Middle ☒	Bottom ☐	All ☐
Within block tree-to-tree Variability	Low ☐	Mod ☒	High ☐	

Notes:
Generally good; want a bit more colour in lower branches.
Target bigger branches in tops.

Rules
- 1 branch per side in top half of tree out
- Remove 12 + 6 o'clock shoots + run secateurs on bottom of branch
- "Single line" the branches / cut wings off

Interested in trying OrchardNet within your business?

OrchardNet takes some perseverance and may require a different way of thinking to what you're used to.

If you're not too sure how-to login to OrchardNet, enter data, add blocks or you just need a few extra pointers don't be afraid to get in contact with your local Front-Line Advisor (FLA), the OrchardNet Administrator (adrian.stone@agfirst.co.nz) or a member of the AgFirst team.

STATE	CONSULTANT	EMAIL	PHONE
OrchardNet Administrator	Adrian Stone	adrian.stone@agfirst.co.nz	+64 6 872 7074
AgFirst (NZ)	Ross Wilson	ross.wilson@agfirst.co.nz	+64 27 449 0775
AgFirst (NZ)	Craig Hornblow	craig.hornblow@agfirst.co.nz	+64 27 436 8441
AgFirst (NZ)	Steve Spark	sspark@agfirst.co.nz	+64 27 437 2344
AgFirst (NZ)	Jonathan Brookes	jonathan.brookes@agfirst.co.nz	+64 27 208 8750
AgFirst (NZ)	Nic Finger	nic.finger@agfirst.co.nz	+64 27 221 4835
FLA North Victoria	Michael Crisera	growerservices@fgv.com.au	+61 448 288 253
FLA South Victoria	Camilla Humphries	chumphries@eem.com.au	+61 427 111 852
FLA Batlow	Kevin Dodds	kevin.dodds@dpi.nsw.gov.au	+61 427 918 315
FLA Orange	Jess Fearnley	jessica.fearnley@dpi.nsw.gov.au	+61 437 284 010
FLA Tasmania	Sophie Folder	sophiefolder@internode.on.net	+61 439 247 172
FLA Queensland	Stephen Tancred	stephen@orchardservices.com.au	+61 407 762 888
FLA Western Australia	Susie Murphy-White	susiemurphywhite@gmail.com	+61 429 413 420
FLA South Australia	Paul James	paul@lenswoodcoop.com.au	+61 419 826 956