



This newsletter has been produced as part of the Future Orchards® program. Future Orchards is a strategic levy investment under the Hort Innovation Apple and Pear Fund. It is funded by Hort Innovation using the apple and pear levy and funds from the Australian Government and is delivered by APAL and AgFirst.

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By the time you're reading this, the end of harvest is likely to be well within your sights. Whilst a well-deserved rest is probably at the forefront of many of your minds I thought I'd take the opportunity in this newsletter to highlight some of the 'next steps' from here, and how you can utilise OrchardNet to assist you in planning next year's crop.

Setting your target croploads and putting a plan in place now can be a very useful to ensure your winter pruning (and thinning activities) are going to meet your goals for the 2019 crop.

To keep things simple this newsletter will be divided into three broad themes that we'll continue to build on into the future:

1. Evaluate
2. Plan
3. Implement

Before we jump into setting the plan for next season it is important to reflect on this season's harvest (where were your issues? What worked well?) to ensure that your plan is going to meet your requirements/challenges.

The majority of this newsletter is focused on entering your production data into OrchardNet and using it to look at how things went and start planning how you want things to be in 2019.

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?

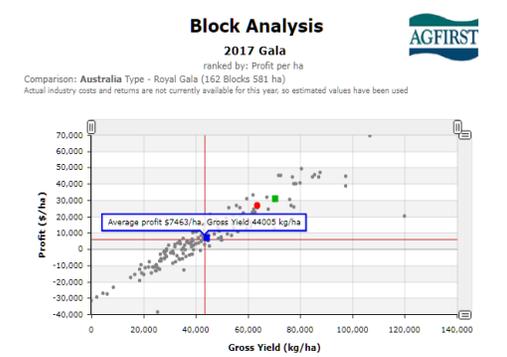
Please contact your local FLA or a member of the AgFirst team (see details on the last page of this newsletter) if after trying the demo you would like to give it a go.



IN THIS ISSUE



Entering data into OrchardNet



Evaluating the 2018 season

Setting up the 2019 crop

Implementing the plan

Step 1: Evaluate - Entering data into OrchardNet

Once you've logged into your OrchardNet account you should see your orchard(s) blocks in front of you. If you haven't set up your blocks (or have more to add) then getting in contact with the AgFirst team to get everything setup correctly is going to be a pre-cursor to the below.

Now is the perfect time to start reflecting on this year's crop and planning for next year's (even though taking a break is probably at the forefront of your mind). Getting your production (bins picked), packout and fruit size into OrchardNet can help you with setting up your 2019 crop.

Check your block details

Before you start entering your data it's important to ensure you've got your orchard blocks set up correctly. Ensure planted area, variety, tree age (planting year) and row spacings are all correct.

If you need to edit this data and aren't too sure as to how to do it; look to the left-hand side of the page for the User Manual icon.



If you haven't entered any data for the 2018 crop so far, the first step is to click "add a new year" next to the "block season details" heading. Once you've made sure your block's details are correct add the new year (2018 is the 2018 harvest).

Next step is adding your 2018 results.

Scroll down to "Production Actual" and click the "2018" icon. You'll then get a window similar to the image shown to the top right on this page.

The simplest option is probably going to be to click on "Bins" but depending on how much you've packed kg may be simpler.

Kg	TCE	Bins	Tonnes per ha
Bin Size (block metric)	<input type="text" value="400"/>	(kg)	
No of Bins Picked	<input type="text" value="120"/>	(total bins picked)	
No of Bins Submitted to Packhouse	<input type="text" value="120"/>	(total bins submitted)	
Class 1 Packout %	<input type="text" value="75"/>		
Class 2 Packout %	<input type="text" value="23"/>		
Process Packout %	Calculated by Database		
Average fruit weight	<input type="text" value="160"/>	(grams per piece)	
High Grade %	<input type="text" value="0"/>		
<input type="button" value="Enter"/>			

Enter the details for that block (ensure you've got a number in every box) and then click enter.

No packout or fruit weight?

If your fruit is in storage you may need to rely on estimated packouts and fruit weights to put into OrchardNet.

Generally speaking, something is better than nothing so put in your best estimates and you can update them later through the same process.

Choose a sensible estimated packout (a previous year or if you've had a portion of this year's crop packed) and a reasonable fruit weight.

Make a note of it

If you've utilised an estimated packout and fruit size I'd encourage you to make a note of it under that block in OrchardNet.

You can add a note by scrolling to the bottom of an individual block's page in OrchardNet and clicking the relevant year (in this case 2018). While you're there I'd also suggest typing in a few comments from harvest to highlight

successes or challenges within that block for this season.

Once you have this data in you'll be able to use the benchmarking tools outlined in the last issue of this newsletter.

<http://apal.org.au/wp-content/uploads/15BDG-Newsletter-April-2018-updated.pdf>

If you haven't entered historical data (and you have it), I'd suggest at least adding the 2017 crop results as well. It's incredibly useful to look at your two last crops (especially if the block has a biennial tendency) when constructing your targets for next year.

After clicking the reports icon;  "Production by year or tree age" and "Block analysis" are great tools to assist you in summarising and evaluating your block performance.

Once you have this year's production in and identified what did and didn't work you can shift your attention forward into planning your 2019 crop.

Advanced users: Bulk data entry

When putting your data into OrchardNet there is also the option of utilizing the 'bulk data entry' tool to speed things up.

Click the pencil icon: 

If you are going to use this tool I suggest reading the manual's notes on how to do so.

Generally, I'd suggest going through each block individually unless you have the relevant data ready and you're quite familiar with the system.

Step 2: Plan - Setting your targets for 2019

Now that you've established what did and didn't work in 2018 (and hopefully also looked at your historical results) you can start putting a plan in place for 2019

Setting a target

Some questions to ask yourself when setting up targets:

- Do you want to carry more or less crop than the block did last year?
- Can you lift your fruit quality (packout) by altering your cropload?

After you've thought about your goals for your blocks in 2019 it's time to set a target.

The simplest method to do this may be to print out the "Annual Crop Summary" or even the "Winter pruning report" and write your targets next to your 2018 actual results.

This way you'll have all of your results on one sheet of paper and then can quickly enter the numbers you have determined.

Entering your target values

In OrchardNet you can do this by entering a "Production Estimate"

Using the same process as previously:

- Click add a new year next to "Block season details" (add 2019)
- Scroll down to "Production Estimate"
- Click "2019"

Depending on how you think about your production per block it may be simpler to use the tonnes/ha rather than bins feature this time. (see image to right).

Kg	TCE	Bins	Tonnes per ha
			Tonnes per ha Picked <input type="text" value="70"/>
			Tonnes per ha Submitted to Packhouse <input type="text" value="70"/>
			Class 1 Packout % <input type="text" value="85"/>
			Class 2 Packout % <input type="text" value="9"/>
			Process Packout % Calculated by Database
			Average fruit weight <input type="text" value="158"/> (grams per piece)
			High Grade % <input type="text" value="0"/>
			<input type="button" value="Enter"/>

After evaluating your performance in 2018 (and in previous years) it's time to set up your 2019 targets. Keep it realistic and ensure your target fruit size fits in with the markets your aiming for and the cropload you want. Remember that fruit size and cropload are related.

Step 3: Implement - Putting the plan into action

Start thinking forward to pruning and thinning and how you're going to reach your goals.

- How much wood do you need to take out when pruning?
- Does the block have biennial tendencies?
- Can you implement early intervention to help break the cycle?

Ensure your pruning is meeting your goals for fruit quality and also your cropload.

“Bud counting” to assist with pruning

Bud counting is a way of getting an early insight into your potential crop for next year but does require a different way of approaching your pruning (and yes, if you utilise it fully you will have to count the number of buds on at least a few trees per hectare; which does take quite a bit of time)

If you want to try 'bud counting' to help you set your cropload. you're going to need to enter a little bit more data into OrchardNet.

Under the “Metrics” heading (scroll down the page for an individual block) you'll want to enter **pickout %** and **buds required per fruit** value.

The **pickout %** is the number of fruit you'll get out of the block once you've set your cropload (e.g. fruit drop in hot weather)

The **buds required per fruit** is a way of estimating the number of set fruit per total buds (both floral and vegetative). This varies by variety, block and region.

Whilst these metrics are best determined through knowing the block and maybe even a little bit of trial and error I've given some sample numbers in the table on this page. Remember that these are examples and might not be the correct values to apply to your situation.

Now that you've entered these new metrics (bud:fruit ratio, pickout %), target/estimate for 2019 (including a fruit weight) and you have an accurate number of trees per hectare (when you ensured your block details are correct) OrchardNet can now calculate the number of fruit you require to reach your goals as well as a number of buds to achieve that target.

As with the benchmarking reports the winter pruning report can be found when you click the reports icon.

Scroll down to “Winter Pruning” and click show report (not “go” as this is used for audit purposes after pruning). Hopefully

you'll have a screen similar to the below image.

You can do this for both individual blocks, or if you're on the home screen for your orchard (where the list of your blocks are when you log-in) all your blocks for which you have entered data will show up.

At this point you can then start counting the number of buds on trees to see how close to your target you are. This data can also be recorded as both pre-prune (monitor) and post-prune (actual) in the metrics area of OrchardNet.

Company:		Winter Pruning Report										AGFIRST			
Property: All		Season Ending 2019													
Production Site: All		Blockname	Ssn	Type	Gross Kg/ha	Class1 Kg/ha	Fruit Harvested Weight (g)	TCA Harvested (cm ²)	Target Actual Fruit /TCA	Buds/ Fruit	Buds/ Fruit	Target Buds/ Tree	Monitor Buds/ Tree	Actual Buds/ Tree	
Block:		All													
A Block															
<u>Gala</u>															
2019	Est	70,000	59,501	158	155	-	-	1.3	201	-	-	-	-	-	
	Act	-	-	-	-	-	-	-	-	-	-	-	-	-	
2018	Act	66,766	57,659	158	147	-	-	0.0	-	-	-	-	-	-	
2017	Act	63,623	48,989	194	114	-	-	0.0	-	-	-	-	-	-	
2016	Act	56,971	42,729	160	124	-	-	0.0	-	-	-	-	-	-	
B Block															
<u>Rosy Glow</u>															
2019	Est	80,000	64,000	170	165	-	-	1.8	297	-	-	-	-	-	
	Act	-	-	-	-	-	-	-	-	-	-	-	-	-	
2018	Act	0	0	-	-	-	-	0.0	-	-	-	-	-	-	
2017	Act	78,283	51,475	174	157	-	-	0.0	-	-	-	-	-	-	
2016	Act	60,646	45,485	160	133	-	-	0.0	-	-	-	-	-	-	
C Block															
<u>Jazz</u>															
2019	Est	15,000	10,500	165	32	-	-	1.8	57	-	-	-	-	-	
	Act	-	-	-	-	-	-	-	-	-	-	-	-	-	
2018	Act	0	0	-	-	-	-	0.0	-	-	-	-	-	-	
<u>Pink Lady</u>															
2019	Est	60,000	45,000	170	124	-	-	1.8	222	-	-	-	-	-	
	Act	-	-	-	-	-	-	-	-	-	-	-	-	-	
2018	Act	0	0	-	-	-	-	0.0	-	-	-	-	-	-	
2017	Act	55,789	39,053	174	0	-	-	0.0	-	-	-	-	-	-	

Variety	Buds required per fruit	Pickout %
Gala	1.5	90%
Fuji	2.5	85%
Pink Lady	1.8	90%
Granny Smith	2.0	90%

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.

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