OrchardNet Update

The cold winter days are a great time to sit down in front of your computer, enter your historical data, and start planning your 2018 crop.

If you don’t have a plan, “you’ll do what you’ve always done” and probably get the same result or worse. Use OrchardNet to track the history of your blocks and to benchmark with other blocks of the same variety and age. Set a goal for 2018 and then work out what inputs will be required to achieve that goal.

The OrchardNet databases are now large, robust sets of data that means you can have confidence with the various benchmark comparisons.

Production

One of OrchardNet’s key functions is to be able to track a blocks productive performance and set targets for the year ahead. We encourage growers to use OrchardNet to plan forward as much as to look back. If you haven’t done so already, we would thoroughly recommend that you enter the last two years production details for each block. The system is setup to allow you to enter the data in multiple forms: either kilos, bins, or tonnes per ha.

Once you have done this, you can benchmark your performance against all other blocks in the database. Once your data is in, use the “Block Analysis” and both the yearly and tree age “Production” reports to see how your blocks compare to the national and regional averages and upper quartiles.

Below you will see the Gala and Pink Lady national average production curves for the past few years. Data in to date shows for 2017 is a bit light so don’t pay too much attention to the current year. We need to encourage more of you to enter your 2017 results so the 2017 benchmark becomes more accurate.

Where do your blocks sit on these curves? Enter your data and have a look. If you’re upper quartile, just keep up the good work. If you’re below upper quartile, ask yourself why that is, then come up with a continual improvement strategy. It could make a huge difference to your business.
Figure 1 Gala Gross Production by Year

Royal Gala Production
comparison: National, Type - Royal Gala
Demo Company AU - AU Model Orchard - AA - R Gala OBA

- Round bullets indicate actual production.
- Square bullets indicate estimated production.
chart by amcharts.com

![Gala Gross Production Chart]

- Database Australia Average Gross Kg/ha
- Database Australia Upper Quartile Gross Kg/ha

Figure 2 Pink Lady Gross production by Year

Pink Lady Production
comparison: National, Type - Pink Lady
Demo Company AU - AU Model Orchard - AA - Pink Lady OBA

- Round bullets indicate actual production.
- Square bullets indicate estimated production.
chart by amcharts.com

![Pink Lady Gross Production Chart]

- Database Australia Average Gross Kg/ha
- Database Australia Upper Quartile Gross Kg/ha
But don’t stop there; use your historical data to set a 2018 “sweet spot” target for each block of trees. Then use the winter pruning and thinning reports to help you farm towards your “sweet spot” targets.

**OrchardNet to calculate Block profitability**

In the last two Orchard Walks we have discussed the need to understand each block of trees profitability to be able to make good decisions on the need for block replacement.


**How efficient was your irrigation last season?**

As some of you are aware, Agfirst capture the Evapotranspiration and Rainfall from a number of BOM weather stations around Australia and have loaded it into Orchardnet. You can see the data toward the bottom of each blocks data screen. We have gone to the effort to load up the last 5 years data so that you can compare from one season to another.

If you can’t see any weather data, go to the property details and ensure the closest weather station is assigned to each property. Note: not all weather stations are loaded at this stage, just the most significant ones for pomefruit throughout the country.

To understand how a water budget works and for guidelines on how to use this functionality read [http://apal.org.au/understanding-irrigation-requirements/](http://apal.org.au/understanding-irrigation-requirements/)

I show the result for my own orchard in 2016 and you can see the results below.

![Monthly Water Use 2016](image)

As you can see in the graph, my crop factor has moved from 64% in Dec to 86 % in Jan. The average over the 4 month irrigation season (Nov-Feb) is 74% YTD. This gives us good confidence that our irrigation has been about right, not too much and not too little.

![Horticulture Innovation Australia](image)
Interestingly we also monitor soil moisture in this block. This monitoring shows soil moisture to have been maintained throughout the season between the Full Point and the Trigger Point. The ideal situation is that the two monitoring systems give you the same feedback.

We would encourage growers using OrchardNet to avail themselves of this additional functionality.

So, plenty of good ways to utilise those cold wintry days working on the business not in the business.

To be able to participate with any of the projects discussed please either contact our OrchardNet administrator (Adrian.stone@agfirst.co.nz) or contact your local Front Line Advisor (details below)

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