# Future Orchards
Business Development Group Update

# Issue 21
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## PREPARED BY NIC FINGER, AGFIRST

First issue of 2019; here's hoping the Christmas/New Year's period was a happy one for you all and you managed to get a small break in before harvest arrives.

Last issue we looked at fruit sizing, nutrition monitoring (a preharvest leaf test can be a powerful tool) and how to update your 2018 packout results into OrchardNet.

With a huge number of growers participating in fruit size monitoring this year I've dedicated the bulk of this newsletter to how to maximise your usage of this tool (and save yourself some time checking it).

With harvest coming up I've also suggested a few extra bits of data that are worth collecting along the way. Picked volumes by block are a great first step to understanding your orchard's individual block profitability and will ensure future decisions are well informed.

Whilst I know it's a busy time, I hope everyone can find a couple of days over the coming weeks to take a small break.

Good luck with your harvest season.

- 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.

## IN THIS ISSUE

**Fruit sizing – maximise your data**

**Harvest – additional data to collect**

# Fruit sizing – setting up reports

With a greatly increased number of fruit sizing participants for the current crop I though it might help everyone with their block comparisons to demonstrate the fruit size reporting feature of OrchardNet.

It is crucial that if you would like to compare your block to other regions that a full bloom date has been entered for the block. This value is then used to compare by days after full bloom (DAFB) rather than date to compare.

You can view more detail in the OrchardNet manual (see left hand pane once logged in). I have summarized how to set up aggregated block reports below.

## OrchardNet's Fruit Size Analysis options

### Single block reporting (see manual p.88-90)
A number of you use this option; when you login you click the relevant block and then choose reporting in the same place you normally enter fruit size data.

- Graphs the diameter of fruit
- Calculates growth rate between measurements
- Overlay historical fruit size data (optional)
- Overlay regional, state and national average fruit size (optional)
- Overlay growth curve targets for common varieties and target fruit sizes (optional)

**Fruit Size Reports**

**Current Year: 2019**

Switch year: **2019** 2018 2017 2016 2015 2014 2013 2012 2011 2010
(If required year is not in list, go back to the Block page to add the year first)

**Full Bloom Date:** 10/10/2018    **Harvest Date:** *not entered*    edit dates

**Readings:**

| Type | date | Measurement | No measured |
|---|---|---|---|
| **Diameter (mm)** | | | |
| ⊗ ☑ | 16/01/2019 | 51.200 | 20 |
| ⊗ ☑ | 06/01/2019 | 48.650 | 20 |
| ⊗ ☑ | 27/12/2018 | 45.750 | 20 |
| ⊗ ☑ | 19/12/2018 | 43.000 | 20 |
| ⊗ ☑ | 12/12/2018 | 40.250 | 20 |
| ⊗ ☑ | 27/11/2018 | 32.500 | 20 |
| ⊗ ☑ | 21/11/2018 | 30.000 | 20 |
| ⊗ ☑ | 15/11/2018 | 25.600 | 20 |
| ⊗ ☑ | 07/11/2018 | 20.250 | 20 |

Add a new manual reading

**Reports:**

**Show measurement type**
- ⦿ Diameter (mm)

**Show Dates**
- ⦿ Actual date.    ◯ Days after Full Bloom.

**Include history** (if available)
- ⦿ None - show current year only.
- ◯ Show 1 year history.
- ◯ Show 2 years history.
- ◯ Show all years history.

**Show Averages**

| Regional: | ◯ Yes. | ⦿ No. |
|---|---|---|
| State: | ◯ Yes. | ⦿ No. |
| National: | ◯ Yes. | ⦿ No. |

**Show Targets**
- ☐ Target Diameter - Granny Smith - 164 g (110 ct)
- ☐ Target Diameter - Granny Smith - 180 g (100 ct)

**Show Report**

## Multi-block reporting (see manual p.91-102)
Reporting on multiple blocks at once can save time and help to identify issues between your fruit sizing blocks (and potentially lead to timely management intervention)

**Company Fruit Size History:**

- produce graphs for each variety (average of all sized blocks) and optionally include historical readings
- great option if you've been using the system for a while and are looking to compare this year against previous on a whole orchard level

**Averages**

Simple average of a selected group of blocks, variety strains etc.

**Customised (Saved Reports)**

- create your own analysis by selecting which varietal blocks to analyse on the graph.
- great option to get all of the data for a single variety on one graph
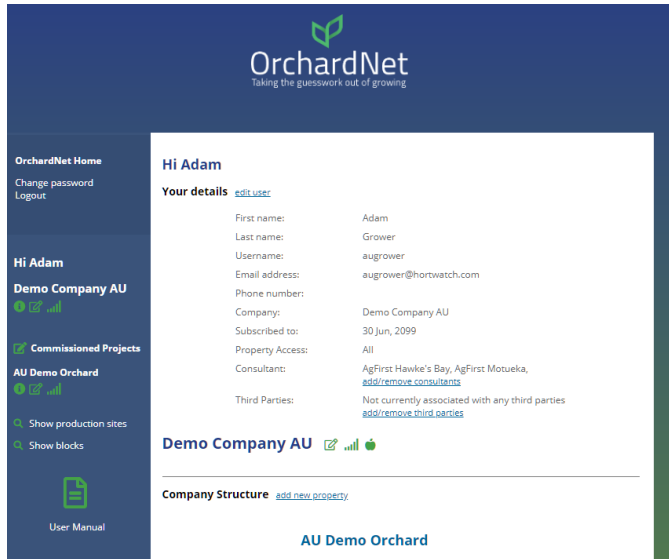
**Customised (Report Stacks)**

Group together your custom reports to produce a 'stack' of all your reports in one window. You can then scroll through all reports in one window/tab

If you setup any Customised (Saved Reports) I'd suggest doing this option.
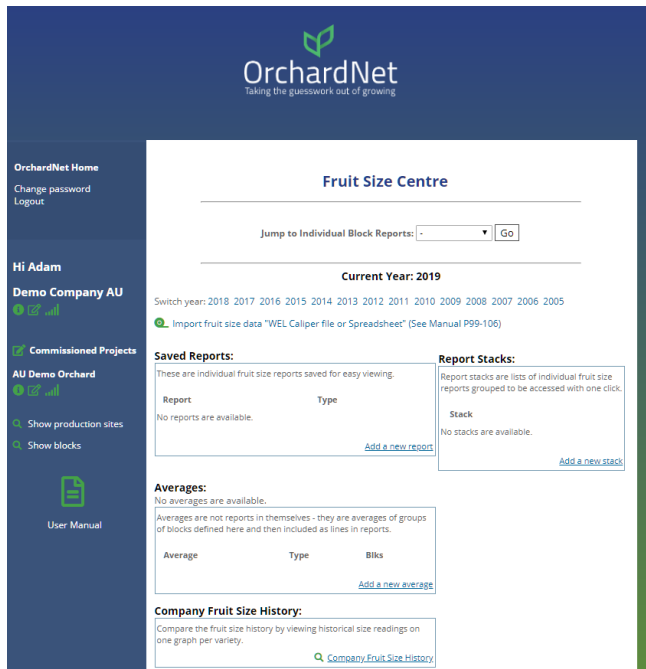
A how to for each multi-block reporting option is shown over the next few pages.

**For all multi-block reporting:**

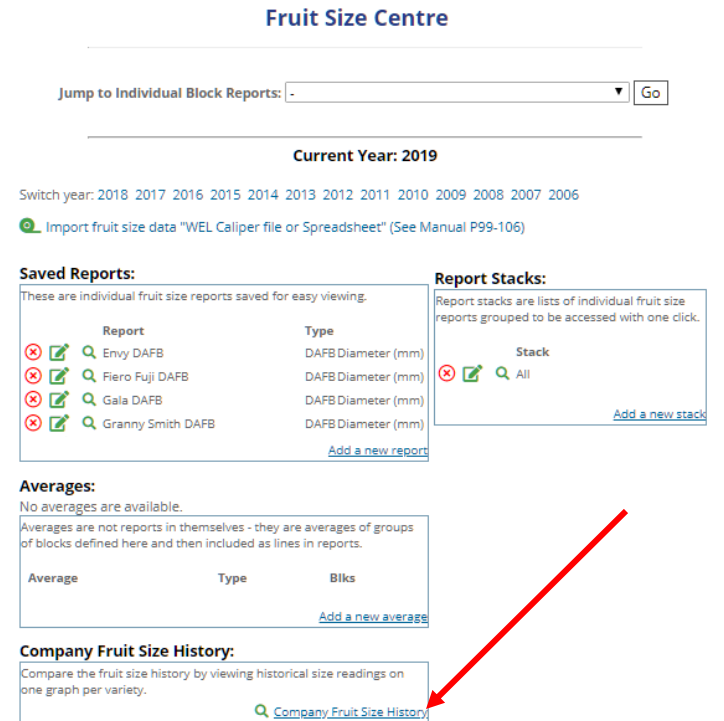Once you have logged in click the below icon:





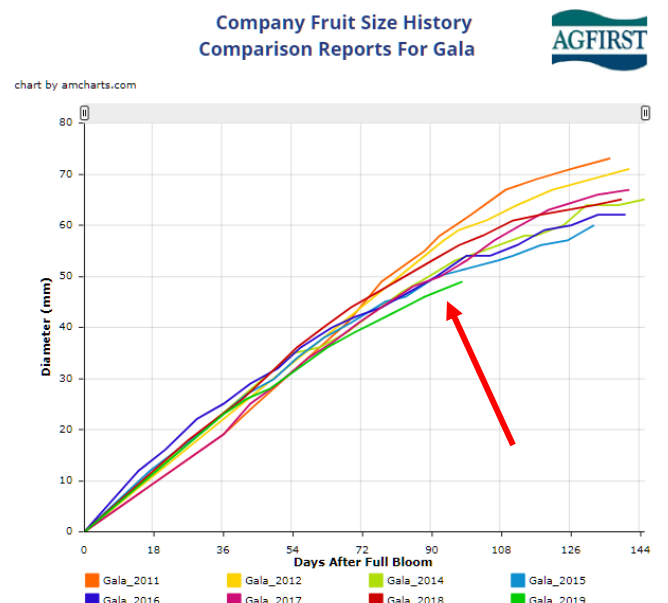This will bring you to the "Fruit Size Centre" page



**Company Fruit Size History:**

Nice and simple; shown in the below image. Simply click the "Company Fruit Size History" link and if you would like to see the data by actual date or days after full bloom.

I'd also suggest leaving historical data as "all"; particularly when comparing by DAFB.



This is what we get. Average size for all sized blocks for each year that data has been collected.



Good for a quick overview (Gala for this grower is the smallest since they've been fruit sizing)

## Customised (Saved Reports)

**Fruit Size Centre**

Jump to Individual Block Reports: [ - ▼] [Go]

**Current Year: 2019**

Switch year: 2018 2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006

Import fruit size data "WEL Caliper file or Spreadsheet" (See Manual P99-106)

**Saved Reports:**

These are individual fruit size reports saved for easy viewing.

| | Report | Type |
|---|---|---|
| ⊗ 🖊 🔍 | Envy DAFB | DAFB Diameter (mm) |
| ⊗ 🖊 🔍 | Fiero Fuji DAFB | DAFB Diameter (mm) |
| ⊗ 🖊 🔍 | Gala DAFB | DAFB Diameter (mm) |
| ⊗ 🖊 🔍 | Granny Smith DAFB | DAFB Diameter (mm) |

Add a new report

**Report Stacks:**

Report stacks are lists of individual fruit size reports grouped to be accessed with one click.

| | Stack |
|---|---|
| ⊗ 🔍 | All |

Add a new stack

**Averages:**

No averages are available.

Averages are not reports in themselves - they are averages of groups of blocks defined here and then included as lines in reports.

| Average | Type | Blks |
|---|---|---|

Add a new average

**Company Fruit Size History:**

Compare the fruit size history by viewing historical size readings on one graph per variety.
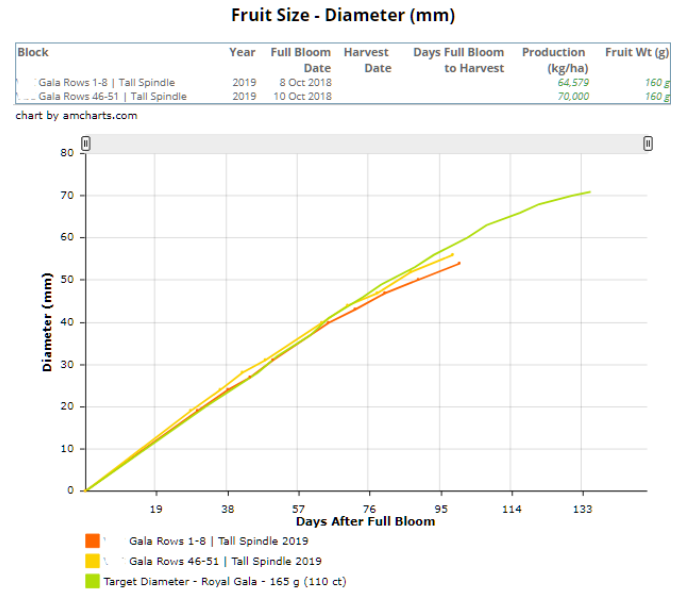
🔍 Company Fruit Size History

A little bit trickier but can be a big timesaver. First; click "Add a new report" (red arrow above)
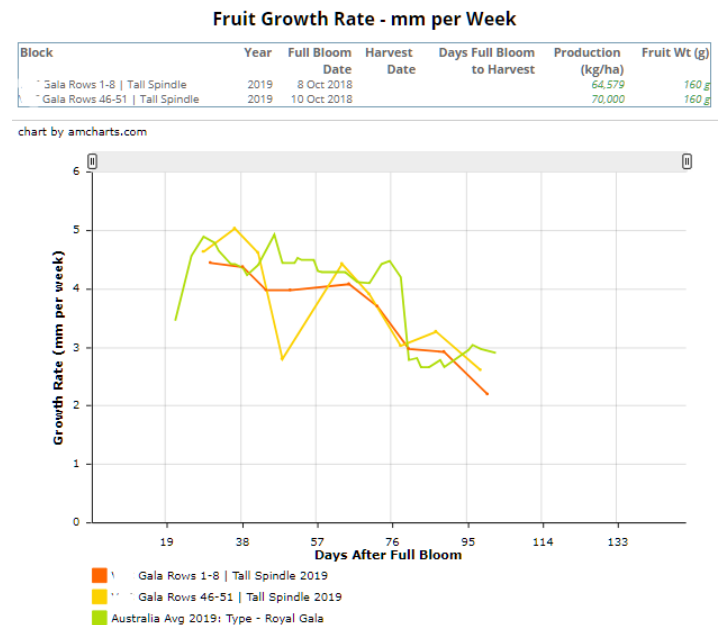
From here:

- Give the report a name
  - eg. Gala DAFB
- Select the variety
  - in this case Gala
- Select actual dates or days after full bloom
  - I'd suggest DAFB
- Select to plot diameter or weights
  - Select diameter (unless you've been picking and weighing fruit)
- Select the block(s) to analyse
  - You might pick Gala on one property or all blocks
  - Choose any block history you'd like
- Select any target growth curves
  - e.g. 165 gram = count 72 in 12kg box

Once your custom report is setup we can view it by clicking on the magnifying glass icon (shown with the blue arrow)

This is the result:



Scroll down to see the growth rates (great for identifying blocks for fertigation or where thinning might be needed)



We can also choose to hide individual lines on either graph by clicking coloured squares for each one we wish to hide.

If you make a mistake; don't worry. Click the pencil icon (next to the magnifying glass to edit your block, selection target or the averages you chose to show.

## Customised (Report Stacks)

You've put the effort into making the customised reports (and likely have more than one variety). Rather than opening each one we can 'stack' all or a selection of these.



First; click "Add a new stack" (red arrow above)

From here:

- Give the report a name
    - e.g. All reports or a property name
- Select the reports you want to see when you click the 'stack'; click next
- Drag the blue boxes in the order you want to see the reports
- You're done

When you click the magnifying glass icon next to your new report stack all of the selected graphs will appear in a new window/tab. Just scroll through the page to get your chosen summary.

## Averages (average a selection of blocks)

First; click "Add a new average" (shown with blue arrow)

From here:

- Give the average a name
    - e.g. Rosy Glow blocks
- Select the blocks you want as part of the average
    - Rosy Glow blocks in this example
- You're done

If you're having any trouble setting up fruit sizing reports refer to the manual (left hand pane when you login to OrchardNet page 88 onwards; otherwise feel free to get in contact with myself (nic.finger@agfirst.co.nz) or another member of the team (see last page of newsletter).

When you are finished with your fruit sizing (ie. day of harvest) I would also suggest that you collect the fruit you've been sampling, weight it and take the average fruit weight. This can then be entered int OrchardNet (same way you enter the size but rather than mm select actual weight). In doing so, you will have your own personalized fruit growth curves assuming you've been measuring the same fruit all season.

Comparisons in future years can then be compared to your own historical outcomes for measured fruit size in a given block.

# Data to collect over harvest

With harvest just around the corner for most of you (or having just started for a very select few) I thought it would be beneficial to highlight some of the data worth collecting over the harvest period.

### Harvest start date

For each block make a note of the date of your first pick. Couple this with the full bloom date and you can get the number of days since full bloom to harvest. Good for getting an early season indication of harvest dates in future years.

### Actual bins picked (by block)

Total bins for a variety is great, but getting that number down to individual blocks is much more powerful when it comes to determining your top blocks from your poor performers.

### Fruit quality (by block)

What do you think the average packout is likely to be for your bins at each pick?

Record this number with your bin tally. Weighing 20+ fruit to get an average fruit weight is also a great way to get an idea of your average count.

### Harvest costs (by block)

Getting a cost to pick a block (including your permanent worker's time) can really help to delve into block profitability and efficiency.

A top heavy crop with significant ladder work is expected to be much more expensive to pick than a nicely balanced slender spindle. Does this impact your block profitability? This sort of data can help make future planting/removal decisions much simpler.

By collecting the above data for each block you have a good basis for block profitability analysis; coupled with industry averages or your own returns data this can be a powerful tool for orchard business decisions.

Blocks need to be looked at objectively with this data to determine whether they're positive or negatives on your bottom line. From here; well-informed decisions can be made

### Additional notes

Did you notice something 'right' or 'wrong' with the fruit coming out of a block? Write it down.

Insect damage, russet in certain parts of the tree, poor colour in parts of the trees, black spot in the tops of trees, amount and type of sunburn etc.

When it comes to next season you can already have a good idea of target zones in the tree for pruning and any tweaks to your spray program or investment you may require in the orchard.

This data can all be put into the OrchardNet notes section (scroll down to the bottom of each block) and revisited after harvest to formulate next year's plan.

Failing that; grab some pen and paper and put all your carefully labelled notes in a safe spot for later review.

**Block profitability can be determined in OrchardNet** with gross volume picked, packout, 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/#bdp

# 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 New South Wales | *Kevin Dodds* | kevin.dodds@dpi.nsw.gov.au | +61 427 918 315 |
| 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 |