

The Tree Certification Trial

September 2017 update



OBSERVATIONS

Trial aim:

As certified nursery trees (*tested negative to viruses known to have an economic effect on the trees performance*) start to enter the industry, APFIP identified the need to set up basic trial to show growers the advantages of planting certified material. APFIP's aim is to evaluate tree vigour, crop yield and packout of the certified and non-certified material for comparison.

Trial Set-Up:

The trial has three separate blocks: Huon Valley, Tas, Lenswood, SA and Stanthorpe, QLD. Each block consists of 500 Gala trees on M26 rootstock - 250 trees certified and 250 non-certified. Management of blocks is completed by hosting growers and all blocks are currently under drip irrigation.

Observations:

Evaluation so far has been restricted to vigour, using the parameters of Tree Height and Trunk Cross Sectional Area(TCSA). As the data for each block shows below, we continue to see an increase in vigour from the certified trees over the non-certified. The increase percentage varies, but a consistent increase of around 15 per cent is to be expected from certified material. We have had a couple of issues that could vary our expectations. Tree quality at planting in the Huon and Lenswood blocks were considered to be 2nd and 3rd grade trees.

In addition the Huon block suffered replant disorder, even after fumigation, which has impacted the collection of vigour data up till now.

Commercial crops of fruit have been harvested in both Lenswood and Stanthorpe in seasons 2016 and 2017 and evaluation of yield and packout is detailed in this report.

Anyone requiring more info on the trial can contact APFIP on [0408 503 528](tel:0408503528) or mark@apfip.com.au.



Evaluation Results Huon Valley Tas Certified Demo Block

notes **September 2012 planting**

Ground - replant fumigated, gray mudstone

Trellis - no trellis for the first growing season

Tree quality - budded combination of grade 1 & 2

Observations 2015 end of 3rd leaf after planting

Due to this block suffering from replant disorder and inconsistent tree performance, it was decided last winter to head all the trees back to a consistent height. With this in mind, no evaluation was made on tree height or TCSA for winter 2014. Due to the very poor performance of this block after 2013 APFIP decided to abandon this trial block in 2015 due to lack of credible data.

% increase over non-certified trees

Year	Tree Height	TCSA
2013	17%	50%
2014	N/A	N/A
2015	N/A	N/A

Evaluation Results Stanthorpe Qld Certified Demo Block

notes **September 2012 planting**

Ground- replant fumigated, light gray

Trellis- installed during first growing season Vee trellis

Tree quality- Very good combination of both budded and 2yld grafts

Observations 2016 end of 4th leaf after planting

Tree performance in this site is very good, we continued to see an increase in overall tree height and TCSA during all seasons. The increase percentage is not as large as the first growing season, this could be due to the fact that this block set a small quantity of fruit in its 2nd leaf after planting. Tree height consistency is one observation made in the certified trees over non-certified.

% increase over non-certified trees

Year	Tree Height	TCSA
2013	16%	18%
2014	5%	6%
2015	4%	4%
2016	5%	6%

Observations on crop yield and packout 2016

Prior to harvest in 2016 hail in this site destroyed the entire crop so no crop yields or packout were recorded or completed for this season.

Observations on crop yield and packout 2017

2017 yielded a full commercial crop, observations were from harvested amounts and packout from manual hand grading of the fruit sample.

Observations clearly showed an increase of 12pc more yield from certified trees. This figure is within our expectations.

Manual sampling of the fruit for packout involved selecting the highest coloured fruit from each sample and recording the pc it made up of the total sample. This clearly showed certified trees delivering 19pc more high-coloured fruit than non-certified.

Fruit Yield Tons/Ha

Year	Certified	Non-Certified
2016	N/A	N/A
2017	33.5	30

Packout

Year	Certified	Non-Certified
2016	Class 1	N/A
2017	Class 1	N/A
	Certified	59%
	Non-Certified	40%

Evaluation Results Lenswood SA Certified Demo Block

notes **September 2012 planting**

Ground- Replant, red loam/clay

Trellis- Installed during first growing season

Tree quality- combination of 2nd & 3rd grade rods all headed at 900mm

Observations 2016 end of 4th leaf after planting

This site continues to develop well. Like the Hansen block, tree quality at planting has had early effects on tree performance. We continue to see an increase, as expected, in both tree height and TCSA in certified over non-certified trees. It is expected that these trees will carry a small amount of fruit in the 2015 season.

Observations on crop yield and packout 2016

2016 yield observations were calculated using grader packout figures. This block is yielding quite low for the age, and this is attributable to the quality of the trees at planting. With this in mind we still observed a 17pc higher yield from certified, and packout showed 12pc more class 1 fruit.

Observations on crop yield and packout 2017

2017 once again showed low yields which was put down to seasonal changes. Certified trees are still maintaining a 10pc higher tonnage. Packouts were interesting in a low total crop. Class 1 fruit were very similar, although we did observe 8pc more fruit in the premium to large range from certified trees.

% increase over non-certified trees

Year	Tree Height	TCSA
2013	6%	31%
2014	12%	18%
2015	3%	27%
2016	10%	11%

Fruit Yield Tons/Ha

Year	Certified	Non-Certified
2016	22	19
2017	11	10

Packout

2016	Class 1
Certified	63%
Non-Certified	51%
2017	Class 1
Certified	84%
Non-Certified	86%

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