



Future  
Orchards

# Comparing Pink Lady primary thinning methods

12 June 2020

Prepared by – Michael Crisera, FGVL



## Main Objective

---

To be able to compare 4 differing thinning programs on Pink Lady apples in the Goulburn Valley.

### 4 plot trial at Plunkett Orchards, Ardmona VIC.

1. ATS + Darwin Thinner
2. ATS only
3. Darwin Thinner only
4. Control (hand thinned)

We are comparing the marketable yields and comparative size profile.

All plots were hand thinned as per normal program.

## Method – 4 Separate Treatments on The Same Block

Darwin thinner alone, ATS alone, Darwin + ATS, and a control



### Thin-It™

#### DIRECTIONS FOR USE

#### RESTRAINTS

DO NOT leave prepared spray for more than 12 hours before using (eg. overnight)  
 DO NOT apply in damp conditions, avoid high humidity and heavy dews, especially at the time of application.  
 DO NOT apply with a wetting agent or surfactant as plant injury may occur.  
 DO NOT tank mix with other pesticides or foliar nutrients.

SITUATION	TARGET	STATE	RATE	CRITICAL COMMENTS
Apples - All varieties	Desiccation of blossoms at flowering and reduction in fruit set	All States	1.5 L per 100 L of water	<p>First application should be made once sufficient bloom has set on target wood. This is usually when 80% of flowers are open. Subsequent applications are made to remove all other unwanted flowers.</p> <ul style="list-style-type: none"> <li>Apply 1 - 2 Applications</li> </ul> <p>Apply as a dilute spray at volumes suitable to achieve an even coverage of target canopy.</p> <ul style="list-style-type: none"> <li>Do not apply at water rates below 500 L/ha.</li> <li>High water rates may increase the potential thinning response.</li> </ul> <p>The use of Tree Row Volume (TRV) is recommended to determine suitable water volume for the target canopy.</p>





## Key Notes

---

1. **Block metrics** – 3.5m x 1.5m twin leader (bibaum) (1904 trees Ha)
2. **ATS Rates** – 15L/HA OR 1.5%
3. **ATS Timing** – 1 day prior to full bloom
4. **Darwin thinner timing** – 3 days prior to full bloom
5. **Blossom period** – quick blossom period from 20% to 100% blossom in 5 days.



## Plot Data at Harvest – 150+ pieces per plot measured + weighed + fruit counts

<b>control</b>	
size avg (mm)	71
weight avg (gms)	156
tree weight ave (gms)	22,936
ave hectare yield (tonnes)	44

<b>Darwin only</b>	
size avg (mm)	70
weight avg (gms)	149
tree weight ave (gms)	31,127
ave hectare yield (tonnes)	59

<b>Darwin only</b>	
size avg (mm)	73
weight avg (gms)	171
tree weight ave (gms)	34,224
ave hectare yield (tonnes)	65

<b>ATS only</b>	
size avg (mm)	71
weight avg (gms)	155
tree weight ave (gms)	23,014
ave hectare yield (tonnes)	44

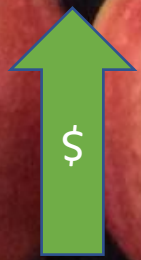
<b>ATS + Darwin</b>	
size avg (mm)	73
weight avg (gms)	167
tree weight ave (gms)	26,313
ave hectare yield (tonnes)	50



Bulk loose



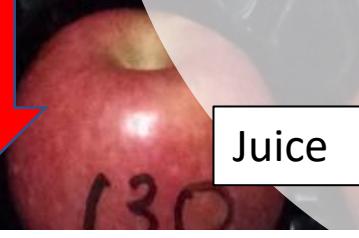
Trays



Trays



Prepacks



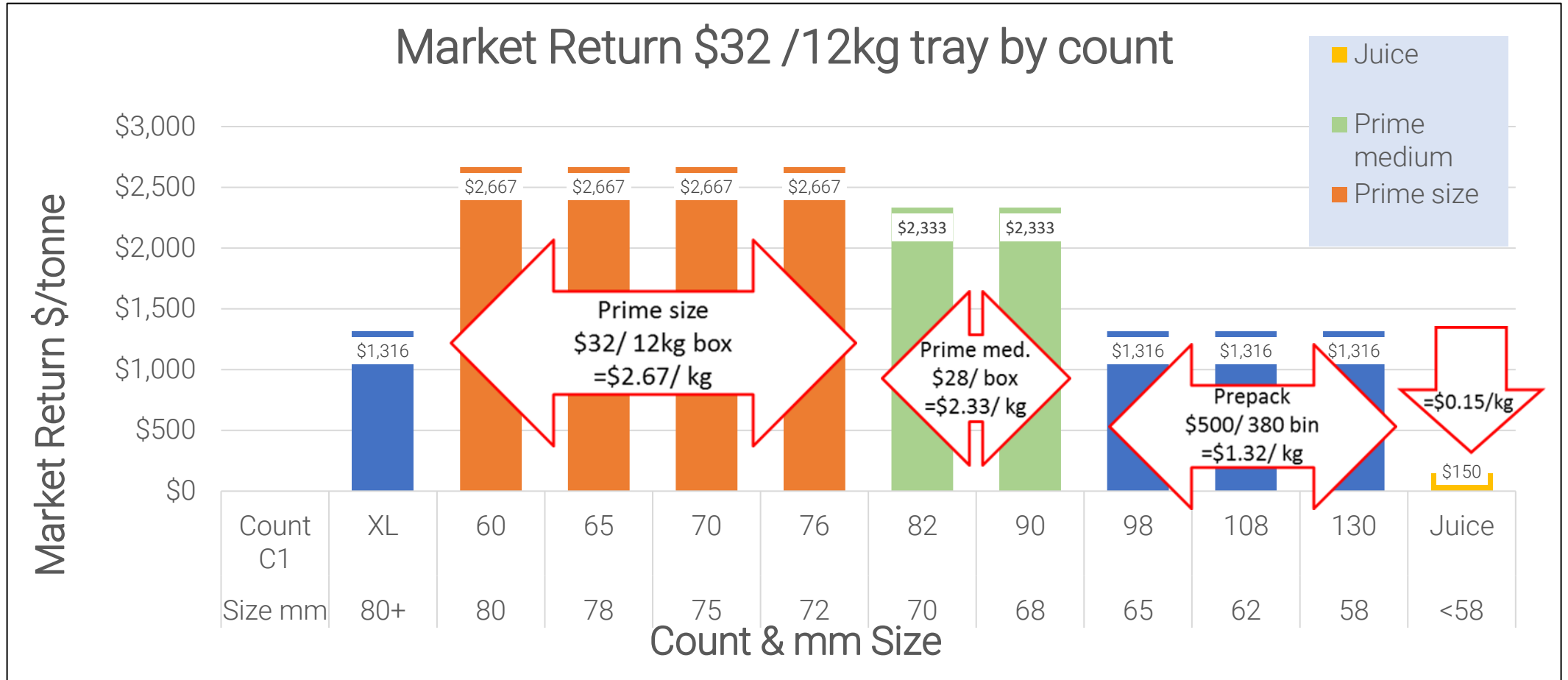
Juice

mm	Class 1
80+	XL
80	60
78	65
75	70
72	76
70	82
68	90
65	98
62	108
58	130
<58	Juice

PACKOUT PERFORMANCE

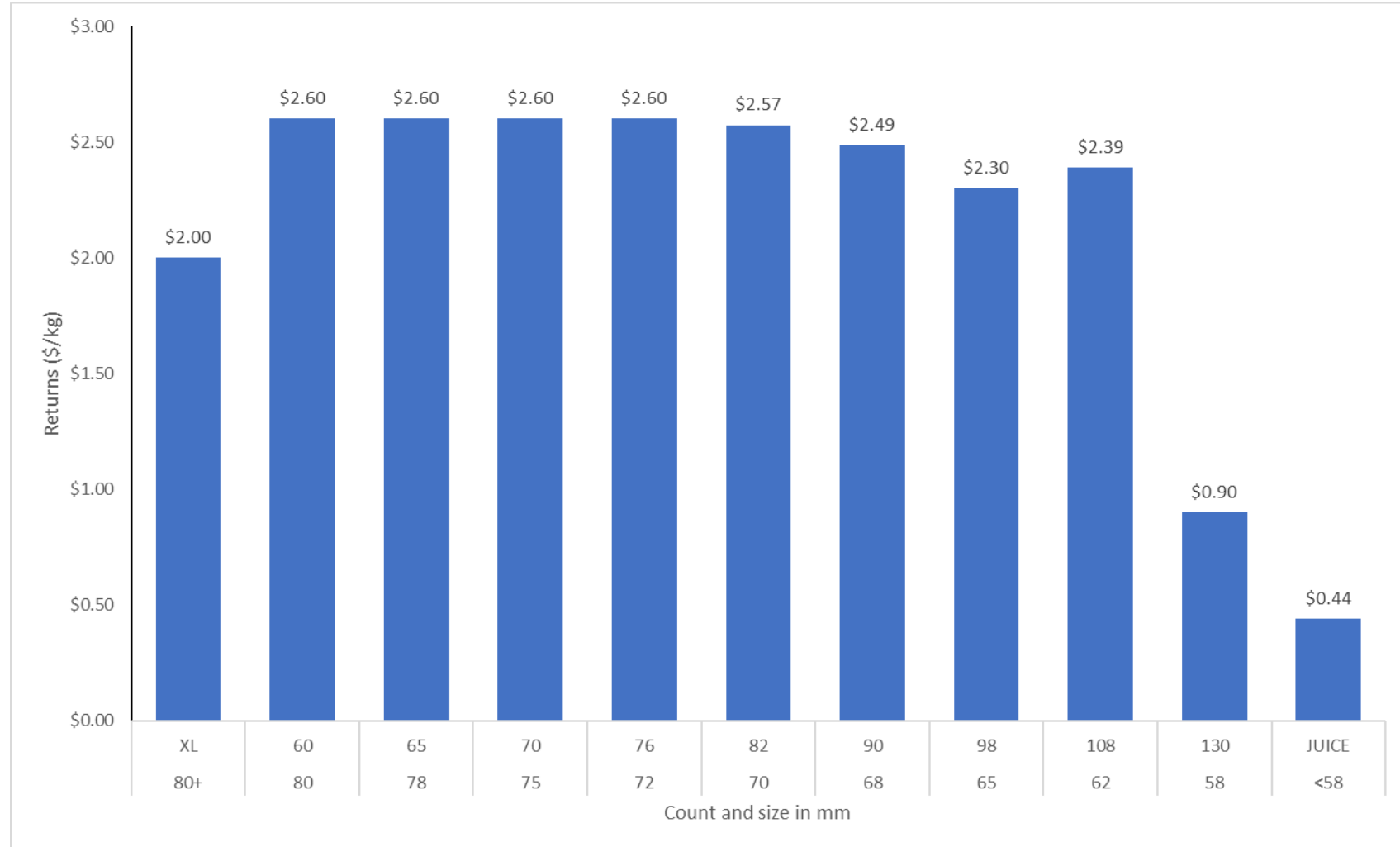


## Market Returns by Size – Pink Lady (Not This Year!!)





## Fruit Size Profile & Value







## Summary/Conclusion

---

Struggled to see much difference in size profile between the 5 plots, so not a good way to compare value after primary thinning.

More fruit set (higher fruit numbers) on blocks that Darwin thinner went through, enhanced pollination.

---

## Comments

The farm/block that the trial was conducted on looked very consistent at blossom and has very good calm wood throughout of similar caliper, hence the consistent size profile in addition to being Pink Lady. I will continue working on a spreadsheet where I can capture size profile on a simple graph. Welcome any comments from Jason Shields to sum up.

---

## Thank you

- Jason Shields and Bavesh Donga from Plunkett Orchards
- Rose Daniel and Alvin Kee from APAL for some spreadsheet assistance.

---

Thank-you

---